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THE
NUMISMATIC CHRONICLE,
AND
JOURNAL OF THE NUMISMATIC SOCIETY.





THE
NUMISMATIC CHRONICLE,
AND
JOURNAL
OF THE
NUMISMATIC SOCIETY.

EDITED BY

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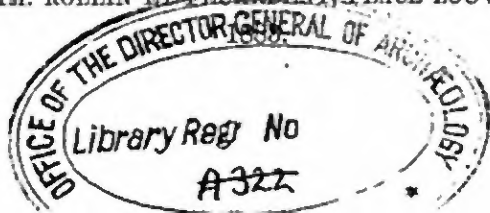


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NUMISMATIC CHRONICLE.

I.

ADDITIONAL TETRADRACHMS OF ALEXANDER THE GREAT.

SOME years ago I ventured to submit to the Society a notice of some unpublished tetradrachms of Alexander the Great,¹ not included in the comprehensive work of M. Müller upon that interesting series, and which was designed, therefore, in some respects as a supplement to his valuable monograph. Having continued to direct my attention to the same series, and finding that it was so far from being exhausted that I have continually had the opportunity of adding fresh varieties to my collection, I have thought it might be worth while to draw up a brief notice as a supplement to my former paper, including the more interesting of those still unpublished varieties which have recently come into my possession.

The subject will doubtless before long receive much light from the publication of the extensive series of coins of this class in the British Museum. But there is still room for other gleaners in the same field; and some of the coins that I propose to bring before the Society are worthy of especial notice, as appearing to indicate the mintage of new cities—that is to say, of such as are not yet included

¹ Num. Chron., N.S., vol. viii. p. 809.

in the long list of towns that struck coins with the name of the Macedonian king. I may add that none of the varieties here described are to be found in the British Museum.

MYTILENE.

1. *Rev.*—Zeus seated, as usual; throno having a back, the pillars of which are surmounted by two small sphinxes. In front, a lyre, beneath it a monogram **Λ** within a wreath; beneath the throno, the monogram **Κ**. Size 9. Pl. I. fig. 1.

The large outspread fabric of this coin, as well as the style of the head on the obverse, refer it beyond a doubt to the class of those struck in Asia Minor on the borders of the *Ægean* Sea, which constitute by far the most clearly marked group in the whole of this extensive series; and the lyre, which agrees precisely in form with that found on the tetradrachms (Nos. 967—978) ascribed by Müller to Mytilene, naturally leads us to assign this coin also to the same city. It differs, however, in two remarkable points from the other coins described by Müller: the one, in having the monogram in front of the seated figure enclosed in a wreath—a peculiarity which, though found on many of the European coins of Alexander, does not occur on any of those belonging to Asia Minor;² the other, that of the pillars at the back of the throno being surmounted by two small figures of sphinxes, in the same manner as they support two Victories in the large group

² The extensive series of tetradrachms (Nos. 709—735 of Müller's catalogue) having a monogram composed of **MYP** or **MHTP** within a wreath, ascribed by some writers to Myrina, is justly referred by M. Müller to Macedonia. The fabric, as well as the title of **ΒΑΣΙΛΕΥΣ**, at once exclude them from all connection with Asia Minor.

of coins supposed to have been struck at Sicyoa.³ This peculiar addition to the ornamentation of the throne is not found, so far as I am aware, on any other coin of Alexander. The figures are, however, so minute that they may easily have escaped observation.

MAGNESIA (?).

2. Same type and style.—In front, a bull in the attitude of tossing, to the left, beneath it the monogram $\Pi\Pi$, and beneath the throne Θ in monogram. Size 9. Plats I. fig. 2.

3. Same type and accessory symbol, but beneath the bull the monogram $\Pi\Pi$ and beneath the throne Λ . Size 9.

A coin apparently similar to the last is described in the catalogue of the Thomas sale (lot 1,242), though the monogram in front is not given, and is assigned conjecturally by Mr. Burgon to Antioch in Caria. M. Müller also has one (No. 1,176), which differs from it only in having the monogram Λ in front of the seated figure instead of beneath the throne, which he assigns also to Antioch, though he strangely transfers it to Antioch in Pisidia, instead of Antioch in Caria, which is certainly the more obvious and probable of the two. But the figure of a bull, which is distinctly characterised as the Zebu, or Indian bull, in the attitude of tossing or butting, is so well known as the characteristic type of the coins of Magnesia ad Mæandrum, that it is certainly the most obvious conclusion to assign them to that city. This is rejected by M. Müller on the ground that there is a considerable series of coins bearing the Mæander in the exergue, which he assigns to Magnesia, while those in

³ See those described by M. Müller, p. 218. I shall have occasion to refer again to this interesting series.

question have not this accessory. But the *absence* of such a characteristic is certainly of very little weight as compared with the *presence* of so marked a symbol, which is found on *all* the earlier coins of Magnesia,⁴ and *on those only*, for the bull, or Zebu, on the coins of Antioch in Caria is in a couchant position, while the coins of Antioch in Pisidia are of so late a date as to have no bearing upon the question at all. But neither M. Müller nor Mr. Burgon would ever have thought of referring these coins to *either* Antioch had it not been for the monogram **A** found upon some of them—a very slender ground at all events, considering the interchangeable character of these monograms, and the extreme frequency of that in question; but which is, in my opinion, entirely destroyed by the two coins I have just described, on which the monogram **AN**, under the throne, is in the one case replaced by that formed of **EP**, while it is not found in front accompanying the bull (as represented in M. Müller's tables) on either of them, that place being occupied by two other monograms, both of them of frequent occurrence on the coins of Alexander.

It may be worth while to add that though these two coins are so closely connected, and the reverses are of similar style, while they both present the broad spread form so characteristic of the coins of Western Asia Minor, the heads are of very different character, that on No. 3 resembling in style those placed by M. Müller under his Class III. rather than those of Class VI., to which almost all the coins of Ionia belong.

⁴ The beautiful tetradrachms with the standing figure of Apollo on the reverse of course belong to a later period.

Cos.

4. Same type and style as the preceding coins; but in the field of *rev.* the monogram \times , together with a crab holding in its claws a club in a vertical position. Size 10. Pl. I. fig. 8.

No doubt can exist as to the city to which this coin is to be referred. It is only remarkable that so opulent a city as Cos, which had so extensive a coinage of its own previous to the time of Alexander, should have struck so few tetradrachms with its emblems. But the only specimen known to Müller was one in the museum of Leyden, on which the crab and club are found one over the other, as usual on the autonomous coins of the city.⁵ Their combination in the manner which is found on my coin certainly constitutes one of the most elegant as well as characteristic examples of such accessory symbols to be found in the whole series. It is worthy of notice also that in this instance the legs of the throne on which the figure of Zeus is seated are supported by two small sphinxes—a peculiarity not uncommon on the tetradrachms of Chios, but which I do not remember to have seen on those of any other city.

SMYRNA (?).

5. Same types, but in field of *rev.* under the eagle a female head to the left, veiled and turreted; under the throne the monogram κ . Size 10. Pl. I. fig. 4.

No doubt can exist with regard to any of the coins above described of their belonging to the western provinces of

⁵ Another variety in which the same symbols are combined, but in a different position, and accompanied by the magistrate's name, $\Sigma\Omega\epsilon\tau\rho\alpha\tau\omicron\varsigma$, exists in the British Museum, though as yet unpublished.

Asia Minor, which constitute so marked a series. But this is otherwise with the coin now before us. Its large size and flat surface indeed at the first glance would lead one to assign it to the same class; to which it may be added that I received it direct from Smyrna, together with several other coins of the same class (of Rhodes, Miletus, &c.), and though I am not disposed to lay too much stress upon this point, it is a fact well known to all who have collected coins in the Levant, that the tetradrachms of this style are derived almost exclusively from the eastern shores of the *Ægean*, of which Smyrna is the commercial centre. On the other hand, the style of work is altogether different from that usual on the coins of Asia Minor. The reverse, which is in very fine preservation, presents a boldness of relief and finish of execution wholly different from the slovenly style of most of the Western Asiatic coins; while the head on the obverse, though equally unlike that usually found on this class of tetradrachms, is far inferior in style to the reverse, and has even something of a semi-barbarous character.

Nor does the adjunct lead to any satisfactory result. The female head would naturally suggest its attribution to Smyrna, which, as we know, placed on its Alexandrine tetradrachms the same turreted head which figures on its autonomous coins.⁶ But when carefully examined, which the fine preservation of my coin fortunately enables us to do, it is found that the head in question is covered at the back with a veil, while it supports only two small towers in front. This combination of the veiled and turreted head is found on many of the autonomous coins of Syrian

⁶ See Müller, Nos. 991—994, and my paper in this Journal, vol. viii. p. 315.

- cities—Seleucia and Sidon for example ; but no instance of such a *coiffure* occurs on the tetradrachms of Alexander struck in that region, and the fabric of my coin appears to me to exclude the possibility of ascribing it to the Syrian series.

I am not disposed to attach any value to the monogram beneath the throne. The combination of K and A in a monogram is extremely common, both on the tetradrachms of Alexander and elsewhere ; and though its position is that which in some instances indicates the city where the coin was struck, this is but rarely the case, and the monograms under the throne in general seem to refer only to some magistrate or local authority ; at least their significance is unknown to us.

SICYON (?).

6. Same types, of very good style of work both on *obr.* and *rev.* In the field, beneath the eagle, a figure of Hercules standing and leaning on his club ; beneath the throne **API**, the two first letters in monogram. Size 6½. Pl. I. fig. 5.

It is with great diffidence that I venture to suggest the attribution of this beautiful coin, certainly one of the most perfect in my whole series, both for style and finished execution, to Sicyon. In fact, I must admit such an attribution to be almost wholly conjectural. But, assuming that the long series ascribed by M. Müller, in accordance with Mr. Newton,⁷ to that city, is to be con-

⁷ See his paper on a number of coins of this class found near Patras in 1850, in the Num. Chron., First Series, vol. xvi. pp. 29—34. It is much to be regretted that we do not possess a few more such copious and accurate accounts of the discovery of deposits of the coins of this enormous series, which could hardly fail to throw much light on their classification.

sidered as correctly determined, I have little doubt that my coin also may find a place in the same interesting suite. Its resemblance in style and character to the one marked by M. Müller as No. 875 is as complete as can well be; and so many of this particular series present, like the one in question, a small figure of some divinity in the field, together with two or three letters or a monogram under the throne, that it is at least an obvious conjecture to include one more with the same characteristic. It is true that a large proportion of the coins thus ascribed by M. Müller are characterised by the marked peculiarity of having two small Victories on the pillars or supports of the back of the throne. But this distinctive character—which appears to have been found on all the varieties included in the find described by Mr. Newton—is wanting on several of those referred to the same suite by M. Müller; among others on those which have certainly the first claim to belong to Sicyon, namely, those which have in the field the chimæra, so well known as the especial type on the autonomous coins of that city. The same thing is the case with M. Müller's No. 875, which, as already observed, presents so close a resemblance in style to my coin.⁸ I must confess that this resemblance is much less striking when compared with others of the same series which have the accessory Victories, these being in general of a larger size, and a grander and bolder style of work.⁹ Without being disposed to contest the attribution of M.

⁸ Both this and the No. 864 of the same catalogue (with the chimæra) are in the British Museum, and the style is in both cases identical with that of the specimens in my cabinet.

⁹ An excellent figure of one of the varieties of this class will be found in the plates (Pl. XI. No. 1178) to the catalogue of M. Gréau's collection (Paris, 1867), where it is erroneously assigned to Potidæa.



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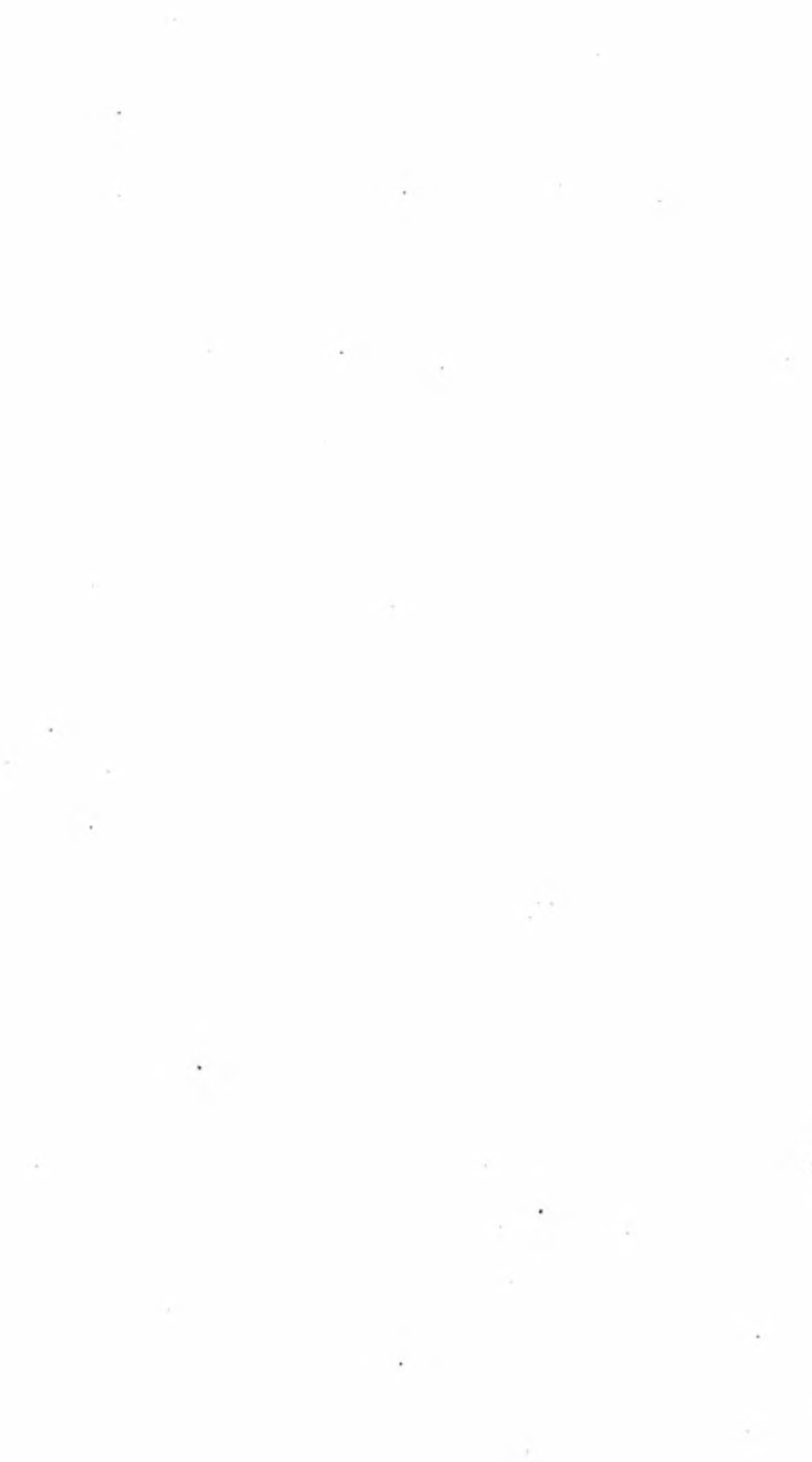
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8



TETRADRACHMS OF ALEXANDER.



Müller's No. 875,¹⁰ I am satisfied that that and the one I propose for my own coin must stand or fall together. The two in my opinion unquestionably belong to the same place and the same period.

But by far the most interesting circumstance attending the coin I am now describing is that of the small figure in the field presenting *exactly* the attitude as well as the attributes of the celebrated statue known as the Farnese Hercules. This statue, as is well known, is the work of an Athenian sculptor of the name of Glycon; but it is universally agreed that the existing figure is only a copy of a work of Lysippus, the contemporary of Alexander the Great; and this opinion may be considered as confirmed by the figure on my coin, which presents so far as possible on so small a scale all the peculiarities of the well-known work of Glycon. Standing figures of Hercules are indeed not uncommon on Greek coins—though no such representation figures as an adjunct on any of the tetradrachms of Alexander that have yet been published—but these simply present the deified hero standing, full front, with one hand resting on his club.¹¹ The attitude

¹⁰ This is connected with No. 864 by having the letters **NO** beneath the lower bar of the throne: a coincidence which is of considerable value when combined, as in this instance, with close similarity of style. Müller's No. 891, with a horse's head in the field, and the letters **ΔΕ** beneath the throne, is assigned by him to Sicily on very slender grounds, but the fabric of the specimen in my cabinet certainly bears a strong resemblance to that of his No. 867.

¹¹ There is, however, as Mr. Gardner has pointed out to me, a small copper coin of a city of Southern Italy (ascribed conjecturally to *Mateola* in *Apulia*), on the *rev.* of which the figure of Hercules is represented leaning on his club, in an attitude closely resembling that of the well-known statue. It is figured in the catalogue of the coins in the British Museum, *Italy*, p. 132.

is therefore widely different from that of the Farnese statue, which we find on the contrary exactly reproduced on my tetradrachm. The hero is here represented as in an attitude of repose, standing, but leaning on his club, over which he is slightly bent to the left, while the club supports his armpit, and rests itself upon a kind of base, without which it would obviously not be long enough to afford the requisite support. The lion's skin merely hangs upon the club, and does not cover as a drapery any part of the figure. The right arm is bent, so that the hand rests behind the back, exactly in the manner that is seen in a front view of the statue. In fact, the agreement between the two is so complete as to leave no doubt that the representation on the coin was not merely intended as a figure of Hercules, but as *the* figure which was familiar to all Greece from the celebrated statue of Lysippus. It has been repeatedly suggested that these small accessory types may in many cases be derived from well-known statues of the divinities represented; but I am not aware of any other case in which this agreement is so clearly proved as in the one before us. If the coin in question be correctly ascribed to Sicyon, the figure in this instance may be plausibly supposed to represent the bronze statue of Hercules which was seen by Pausanias in the Agora of Sicyon, the native city of Lysippus.¹² The most celebrated of his statues of this hero were in a sitting position, and have, therefore, nothing in common with that on my coin, or with the well-known statue by Glycon.¹³

¹² Pausanias ii. 9, 6. Unfortunately the author gives us no particulars as to the attitude of this statue.

¹³ See Bruan, *Griechische Künstler*, vol. i. pp. 361—363.

The remaining tetradrachms in my collection, which I take this opportunity of laying before the Society, are of less interest, but are still worthy of notice as presenting accessory symbols unknown before, or monograms in the place of such symbols, which are not included in the copious list of M. Müller.

7. Usual types, with title of ΒΑΣΙΛΕΥΣ on *rev.*, and throne without a back. In front of the knees of seated figure the forepart of a lion standing. Size 8. Weight 261 grs. Pl. I. fig. 7.
8. Same types, and throne without a back. In field, beneath the eagle, a closed quiver in a horizontal position, beneath it the monogram \times . Size 8½. Weight 263 grs. Pl. I. fig. 8.
9. Same types, but throne with back. In field of *rev.* the fore-half of a boar with rounded wing to l., beneath it the monogram $\times\phi$, and beneath the throne ME. Size 9. Weight 264.5 grs. Pl. I. fig. 6.

M. Müller has figured (No. 995) a tetradrachm with the fore part of a winged boar, similar to that on the coins of Clazomenæ, which he on this account naturally assigns to that city.¹⁴ But the treatment of the symbol on my coin is so wholly dissimilar, and especially the prominence given to the *rounded wing* (which is never so represented on the coins of Clazomenæ) gives it such an altered aspect that it would be taken at first for something entirely different, and was so, both by myself and others, until Mr. Head had the sagacity to perceive its true signification. On this account I have thought it as well to include

¹⁴ A *drachm* with the same adjunct has come into my possession while these sheets were passing through the press. But in this case there is the additional adjunct of a spear-head behind the seated figure, exactly as it is found on the long series of drachms (Nos. 311—325) ascribed by M. Müller to Cardia.

it in my plate, though not presenting, strictly speaking, a *new* symbol. The two monograms also are different from those given by Dr. Müller.

10. Same types, throne with a back. Beneath the eagle $\Lambda\Upsilon$ in monogram, and K beneath the throne. Size 8. Weight 266 grs.

11. Same types, throne with a back. Beneath the eagle the monogram PP ; no monogram under throne. Size 8½. Weight 261 grs.

I must confess myself wholly at a loss to attribute any of these upon plausible grounds to any particular city; and I have, therefore, given full particulars concerning them, in hopes some of my readers may be more ingenious or more fortunate.¹⁵ The first (No. 7) is the only one of the five which has the title of king, and from this circumstance, together with its smaller size and greater thickness, may be referred with most probability to some place in the European dominions of Alexander. The style, which belongs to the Class IV. of Müller, is not decisive, as between the coins of European origin and those of Syria or Cilicia, several of which have the title of ΒΑΣΙΛΕΥΣ , though it is not found on any of those of Western Asia. The accessory type is very peculiar, the standing figure of a lion being of rare occurrence on any of the coins of Greece, Macedonia, or Asia, while the half lion is, so far as I remember, always in an attitude either of crouching or running.

The other four coins furnish no indication to guide us.

The two last (Nos. 10 and 11) belong to the large series of coins in M. Müller's plates (Nos. 1562—1662), which have no accessory symbol, but a monogram in the field,

¹⁵ With the same view I have figured the first three of them.

beneath the eagle or the outstretched arm of Zeus, the place where the symbol of the city, when there is one, usually makes its appearance. Such monograms *may*, in some cases, represent the initials of a city name; but I am inclined to believe that in general they are merely those of magistrates, similar in this respect to those so often found accompanying symbols that undoubtedly indicate the place of coinage.

Before closing this paper I may take the opportunity to mention another coin in my collection, which, though not new, presents a peculiarity that I do not remember to have seen noticed. This is the variety assigned by M. Müller to Joppa in Syria, on account of the letters ΙΟΠ (thus arranged ΙΠ) in the field of the reverse. The attribution appears rather a dubious one, though I have no better suggestion to offer. But the peculiarity which distinguishes my coin, as well as the specimen in the British Museum (which is in all respects identical with mine), is that the head on the obverse is turned towards the *left* instead of to the right, as on all the other tetradrachms of Alexander which have come under my observation.¹⁶ The point is one of little importance in itself, but is worthy of notice as an anomalous departure from the general rule. M. Müller makes no mention of this singularity, though he cites three specimens of the coin from the museums of Vienna, Berlin, and Copenhagen.¹⁷

¹⁶ While these sheets were passing through the press, Mr. Evans has exhibited before the Society (Feb. 15) a tetradrachm presenting the same peculiarity, which may probably be referred to Melitæ in Thessaly. This is, so far as I am aware, a unique instance of its occurrence on any coin of European fabric.

¹⁷ A coin with the same peculiarity of the head to the left was sold in the Bompou Collection (lot 846), but as usual in sale catalogues the monogram is not given.

It would be curious to know whether the same peculiarity is found in them all.

P.S.—The above essay was written before I had seen a notice by Mr. Head in the last number of the Numismatic Chronicle,¹⁸ in which he advances a startling statement that, if admitted, would render all such attributions as I have suggested for the tetradrachms above described altogether worthless, and throw the whole classification of the coins of Alexander into hopeless confusion. In a brief notice of a paper by Dr. von Sallet in the *Zeitschrift für Numismatik*, Band ix. Heft ii., he considers it as proving that the whole system of arrangement proposed for this class of coins by Dr. Müller is “an edifice resting on a foundation of sand,” and adds, “the symbols, however much they may resemble municipal devices or coin-types, are, as Dr. von Sallet clearly shows, merely the signets of the monetary magistrates, and only very exceptionally to be accepted as mint-marks” (p. 297).

Now, with all respect to Mr. Head, Dr. von Sallet has not only proved nothing of the kind, but, as far as one can judge from his article, had no intention of doing so. In the very brief memoir in question he points out that two gold staters of Philip II., the one with a tripod as accessory symbol, and on this account assigned by Dr. Müller to Philippi, the other with a different symbol, similar to that on Dr. Müller's No. 233, had the head on the obverse side *from the same die*, and could not, therefore, have been minted in different towns. From this fact he derives the conclusion that great caution is requisite in the application of Dr. Müller's method, and “that these

¹⁸ Num. Chron. Third Series, vol. ii. p. 296.

accessories do not by any means in all cases indicate the places of mintage, but at times are, without doubt, the distinguishing marks of the mint-masters, or magistrates, who presided over their issue, without any geographical signification whatever."¹⁹ In this view, as stated by Dr. von Sallet, I should entirely concur, but this is a very different thing from the sweeping generalisation deduced from it by Mr. Head, against which I beg to enter an energetic protest. The principle on which Dr. Müller has based his classification of the coins of Alexander, that where we find in the field of the reverse a symbol well known as that characteristic of the autonomous coins of a particular city, this may be taken as a sign that the coin in question was struck in that city, was so far from being *new* or peculiar to the Danish numismatist, that it has been adopted, I believe, by all writers on the subject from Eckhel and Mionnet to the present day; but it has often been applied, especially by Mionnet, in a very haphazard manner. Hence Dr. Müller has made a most valuable contribution to numismatic science by the systematic manner in which he has treated the whole subject, as well as by the vast mass of materials that he has brought together. But I believe that all those who have worked much in the same field will have come to the conclusion that many of his attributions are hazardous and doubtful, and that he has been led, by his desire to explain everything according to one uniform system, into difficulties of which his interpretation will hardly be admitted by other numismatists.

Neither Dr. von Sallet nor Mr. Head have noticed that I had already brought forward a case similar to the one

¹⁹ *Zeitschrift*, p. 163.

adduced by the former writer in an article on some coins of Lysimachus (published in the Numismatic Chronicle for 1869), where I pointed out that the portraits on the obverses of two coins attributed by Dr. Müller to two cities remote from one another were in fact from the same die.²⁰ But I made use of the argument derived from this circumstance only to prove that it was highly improbable that two coins thus intimately connected should have been struck, as supposed by Dr. Müller, the one in Thrace, the other in Caria. And to this extent I still hold the inference to be a sound one. But I am very far from accepting Dr. von Sallet's conclusion that it is impossible for two neighbouring cities to have made use of the same die—a suggestion which he, in an offhand manner, dismisses as “absurd,”²¹ entirely overlooking the circumstance mentioned by me in the paper already referred to, on the authority of Mr. Poole, that this combination of the same die on the obverse with different mint-marks on the reverse is one of common occurrence in the coins of the Ptolemies. Mr. Poole's further researches into that interesting series have, as he now informs me, shown that the practice was in their case so frequent that it may be almost termed general, and he concurs with me in thinking that there is no “absurdity” in supposing the same plan to have been adopted in regard to other regal coins.

The subject is much too extensive to be discussed in a brief notice like the present. But I may take this opportunity to state that subsequent researches in this interesting branch of numismatics have confirmed me in

²⁰ Num. Chron., N.S., vol. ix. p. 6.

²¹ *Zeitschrift*, l. c.



1



2



3



4



5



6



TETRADRACHMS OF ALEXANDER.



the conviction, expressed in the paper above referred to (published in 1869), that Dr. Müller's system of explaining the mint-marks, in all possible cases,²² as the symbols of cities, cannot be regarded as established on sufficient grounds; but that many such attributions rest upon reasonable inferences, and have the same claim to be accepted by numismatists as most of the other conclusions generally adopted by them appears to me unquestionable.

As my former paper on the tetradrachms of Alexander was not accompanied by figures—the admirable mode of illustration by autotype not having been then introduced—I have thought it might be acceptable to the readers of the Num. Chron. to append to the present memoir an additional plate, in which I have figured the most interesting of the coins described in my former article. Although the principal types of the tetradrachms bearing the name of Alexander undergo no variation, they present such differences in style and treatment that it is always desirable, if possible, to have accurate figures of the coins themselves, as well as the mere description of the monograms or accessory symbols. I subjoin a table of reference to the pages where the coins now figured are severally described.

•Plate II., fig. 1,	is described in Num. Chron.,	vol. viii.	p. 810.
„ fig. 2,	„ „ „ „	„ „	<i>ibid.</i>
„ fig. 3,	„ „ „ „	„ „	p. 818.
„ fig. 4,	„ „ „ „	„ „	p. 815.
„ fig. 5,	„ „ „ „	„ „	p. 816.
„ fig. 6,	„ „ „ „	„ „	p. 819.

²² See his remarks in the Num. Chron., vol. x. N.S., p. 7, in reply to my observations on the coins of Lysimachus above referred to.

EDWARD H. BUNBURY.

II.

COINAGE OF ALEXANDER THE GREAT.

AN EXPLANATION.

IF the brief abstract of Dr. von Sallet's paper to which Mr. Bunbury has called attention be calculated to mislead, and if it expresses more than the learned German Numismatist's words seem to warrant, I fear that Mr. Bunbury has fallen into a like error with regard to my own estimate of the value of Müller's system of classification, for I certainly had no intention of advancing a "startling statement which if admitted would render all [local] attributions of Alexander's coins altogether worthless, and throw the whole classification of this class of coins into hopeless confusion."

I therefore take this opportunity of correcting a false impression which Mr. Bunbury's words might well convey to the minds of some of our readers.

My own view of Müller's work does not, I imagine, differ essentially from that of Mr. Bunbury himself. Dr. Müller has divided the coins bearing the name of Alexander into seven distinct classes, which follow one another in approximate chronological order. Of these classes, Nos. I. to IV. are for the most part *regal coins* belonging to the age of Alexander and his contemporaries down to about B.C. 280, while Classes V., VI., and VII. are now generally recognised as being considerably later, and *not regal coins* at all, but the currency of free cities, chiefly of western Asia Minor, Phœnicia, and Thrace—cities which adopted for commercial reasons the types of the coins of Alexander,

at least a hundred years, roughly speaking, after his death. Now these late autonomous municipal tetradrachms, which may be called Alexandrine imitations, almost always bear as an accessory type the symbol of the city where they were issued. There can be no shadow of doubt about the interpretation of these signs, which are, moreover, very often accompanied by the initial letters of the towns, such as E—Φ and a bee on coins of Ephesus; ΜΙ and a lion on those of Milotus; ΚΟΛΟ and a lyre on those of Colophon; with many others.

So far Müller's classification is undoubtedly correct, and is in fact the only possible one.

But the question arises, are we warranted in applying exclusively the same system of local classification by adjunct symbols to the *regal* coins of the age of Philip and Alexander, or are the symbols on the earlier coins frequently capable of a different interpretation altogether?

For my part I am strongly of opinion that a very large proportion (perhaps three-fourths) of the symbols on the coins of the earlier classes (of European Greece and Macedon) are in no wise to be accepted as the municipal devices or mint-marks, but rather as the *official signets of monetary magistrates*, and I should be inclined to designate any classification of the earlier *regal* coins which rests upon the hypothesis that the symbols are in all cases municipal devices as "an edifice based on a foundation of sand." To this class alone (the only one, he it observed, of which there was any question in Von Sallet's paper) was the expression intended to apply, and I need hardly state that no one of Mr. Bunbury's attributions of the late Alexandrine imitations figured in his plates would be in the least degree affected were it universally admitted.

BARCLAY V. HEAD.

III.

SOME RE-ATTRIBUTIONS.

IN the Catalogue of Roman Medallions in the British Museum, edited by my friend, Mr. Grueber, a work of great value and interest, there is figured on Plate LV. a famous medallion which came to the Museum from the Blacas collection. The obverse of this medallion is thus described in the text:

1. *Obv.*—IMP C C VAL DIOCLETIANVS P F AVG.
Head of Diocletian, r., bare, bearded; below, a palm branch, incuse: border of dots.

If there be one thing which must impress a student more than another in Roman iconographic art, whether in statues, busts, or medallions, it is the skill of the artists in portraiture, and, as is only too familiar, a very large proportion of coins found having their legends obliterated, can, nevertheless, be at once attributed by a glance at the head. If we remember this, and turn to the medallion under discussion, we shall hesitate to accept the head upon it as that of Diocletian, notwithstanding the legend around it. Diocletian's head is one of well-marked character—with a square jaw, projecting cheek-bones, perpendicular forehead, &c., &c. This head, on the contrary, is entirely different, with its round jaw, fat cheeks, and low type of forehead. Whose head is it? This again is assuredly

easy to decide. If we compare the head on the medallion with those on the bronze coins of Diocletian's colleague, we shall at once see that this is in every probability the head of Maximianus, whose features are of the typical Herculean type, and unmistakable. Maximianus was, of course, the colleague of Diocletian for some years, and medals are extant with the heads of the two emperors upon them, although no specimen is contained in the rich collection in the Museum. I venture, therefore, to differ from Mr. Grueber's description, and to assign the head on this fine medallion to Maximianus Hercules. This is not all, however. The head we are discussing is remarkable for the absence of the laureated crown—the sign of the Imperial dignity—a most unusual omission in the case of an emperor. This would induce one to conclude that it represents Maximianus as Cæsar, and before he was given the title of Augustus.

Gibbon says of Diocletian, "After the example of Marcus, he gave himself a colleague in the person of Maximian, on whom he bestowed at first the title of Cæsar, and afterwards that of Augustus;" adding in a note, "The question of the time when Maximian received the honours of Cæsar and Augustus has divided modern critics, and given occasion to a great deal of learned wrangling. I have followed M. de Tillemont ('*Histoire des Empereurs*,' tome iv. pp. 500—505), who has weighed the several reasons and difficulties with his scrupulous accuracy." (Gibbon, ii. 66 and note 6.) Eckhel, says Dean Milman, took the same view. To this I would only add that, as the medallion was struck at Nicomedia, it is not improbable that it was the work of some sycophants or friends of the Cæsar—whose reputation as a military man far outshone that of his patron, Diocletian—and who

thus wished to do him honour, as they did in other instances, and in later times, by putting his head on one side of a medallion, and Diocletian's on another.

In the volume of the catalogue of Greek coins in the Museum devoted to the Seleucidæ, edited by another of my accomplished friends, Mr. Gardner, is an attribution in which I cannot concur. The coin I refer to is figured on Plate III. of that volume, No. 2, and is a tetradrachm attributed to Antiochus I. The head of Antiochus I. has a very marked idiosyncrasy. The pinched lips and square cheeks are as marked on his young head as shown in Fig. 3 on the same plate as on the older heads in Figs. 4, 5, 6, and 7. The head on the coin numbered 2 is entirely different in every respect. Not only so, but it is precisely the head of Antiochus II., with the same deep sunken eyes and general outline. See Plate V., Nos. 5 and 6. This view is based on the portrait only, but when we turn to the reverse of the coin the question is put beyond doubt. The type on the reverse of the coins of Antiochus I. is consistently that of Apollo sitting on the omphalos; but in this particular case, the one exception, we have the type of Hercules seated on a rock, which is an ordinary reverse type on the coins of Antiochus II., and I have no doubt whatever that the particular coin in discussion ought to be attributed to Antiochus II. and not to Antiochus I. This identification would enable us further to conclude that the Hercules type was first introduced among the Syrian monarchs with Antiochus II.

The tetradrachm of Seleucus II., marked 14 on Plate VI. of the same volume, is, I presume, the unique coin mentioned in the Museum Report for 1875. It is rightly described in the text of the catalogue, p. 19, but on the plate, instead of being marked as of silver, is labelled *Æ*.

In regard to a third coin described in the same volume, I have great hesitation, inasmuch as it is ill-preserved, and I cannot consult the original itself. I refer to the coin numbered 5 on Plato II. This coin is assigned to Seleucus I. Is the reading of the name Seleucus on this specimen quite certain? and, if so, is it quite certain that it belongs to Seleucus I. The reverse type of Apollo on the omphalos is very common on later coins, but it occurs apparently on no coin assigned to Seleucus I., except this dubious specimen.

I have lately written a memoir on the griffin, and have had to make some special inquiries into its occurrence in Greek art. The griffin is a perfectly well-known fabulous animal, with distinct attributes, and we have more than one elaborate description of it—notably that of Ctesias, as preserved by Aelian and Photius. All these descriptions agree that it was a quadruped, with the head, beak, and wings of an eagle, and the body and limbs of a lion. A lion-headed griffin is as much a solecism as a lion-headed Cerberus would be. I have therefore always doubted the description given in the Catalogue of Greek Coins of Thraee, &c., of the reverses of certain coins of Panticapæum, in which the type is described as a horned griffin with lion's head (*op. cit.* 4). The animals so referred to are figured in full-face; but, as it seems to me, they clearly are meant to be represented with the proper griffin's head, which is given in profile in coin No. 20 on p. 7, and is quite different to a full-faced lion's, as represented on coin 7.

The complicated head of a griffin is naturally difficult to represent in full detail when foreshortened; but it certainly seems to me that the artist has tried on these coins to represent an animal with a head differing from

that of a lion, and that it would be most rash to suppose on the evidence of these heads that the Greeks were so confused in their natural history as to forget that a real griffin had an aquiline and not a leonine head.

As an appendix to this *olla podrida*, may I refer to a very different matter—namely to the site of Calleva, a famous ancient British town, the mint-place of some of the coins of the sons of Commius. It has been generally identified with Silchester—an identification about which I have always felt a difficulty. It is apparently based on no other evidence than a vague conjecture on the part of one of the older antiquaries, which has been persistently repeated.

Stukeley's reputation as an antiquary has suffered much from some of his fantastic opinions in archæology, but this should not blind us to his sagacity as an interpreter of Antonine's Itinerary, and the difficult document that is usually attributed to the anonymous geographer of Ravenna; and in this instance I believe that he was, if not quite, very nearly right. He very properly calls attention, as does Mr. Evans, to the fact that Henry of Huntingdon gives us the British name of Silchester as *Caer Segaint*. His words are, "*Kair Segent quae fuit super Tamesin non longe a Redinge et vocatur Silcestro*" (Evans, *British Coins*, 225). In favour of this view we have the important evidence of an inscription actually found at Silchester, with the words "*Deo Her(culi) Saegon*" (id. 274). Several coins are known inscribed *Sego*, which have been attributed, with some probability, to some town with a name like *Segontium*. All this is *pro tanto* evidence against identifying Silchester with Calleva, since Silchester had, as we see, another name. This is greatly strengthened when we turn to Antonine's itineraries, and dissect those in which Calleva is named. They have been dissected

with skill and force by Stukeley, and he shows how impossible it is to reconcile them with the facts if we place Calleva at Silchester. He urges that the Attrebatian capital was really at Farnham, in Surrey, and assigns Surrey as the country of the Attrebates, Berkshire being the land not of the Attrebates but of the Bibroci, who left it their name. By placing the Attrebates in Surrey we, as Stukeley says, are supported by Ptolemy, who places them next to the Cantii. I would remark that a very strong piece of evidence in favour of this conclusion which has accumulated since Stukeley's day is that of the coins. So far as I know, none of the coins minted at Calleva, or attributed to that mint, have been found anywhere near Silchester, nor, in fact, in Berkshire, where only the primitive uninscribed British money has occurred. On the other hand, Surrey is very rich in coins of Epaticeus and Verica, which are those assigned, with every probability, to Calleva.

While fixing upon Surrey as the home of the Attrebates, I cannot quite concur with Stukeley in identifying Calleva with Farnham. In such a difficult matter it is impossible to come to any other than a tentative conclusion; but I have long thought that Guildford represents the old Attrebatian capital. The particle "ford" marks the name as a British name, as in the case of Hereford, Oxford, &c., &c., "ford" meaning a road in Celtic. The other half of the name seems to me a probable survival of the name Calleva, which Camden, it will be remembered, reads Gallewa. Guildford is the very focus of the district in Surrey where the British coins abound, and seems in other ways to fit in very well with all the facts.

H. H. HOWORTH.

IV.

SILVER STYCAS OF NORTHUMBRIA AND YORK.

IN the twentieth volume of the Numismatic Chronicle, N.S. p. 62, Major Creeke has called attention to the silver and base silver coins of Eanred and Ethelred II., Kings of Northumbria, and he follows Mr. J. Rashleigh in his article on the coins of that kingdom (N.C., N.S. ix. p. 62) in denominating these as silver sceattas. I venture to differ from the conclusion to which he arrives, and strongly adhere to the view adopted by the present President of the Numismatic Society, who, in his annual address to the members of that Society in July, 1880, referred to the subject, but considered the coins described by Major Creeke to be stycas, and not sceattas. It is, however, if only *ex abundanti cautela*, of some importance to collect as much information and as many facts upon the subject as possible, in order that by a full comparison of these some exact result may, if practicable, be arrived at. For this reason I think it would be well if the very full list of coins of silver and base silver issued under the Northumbrian kings, so usefully compiled and communicated by Major Creeke, were added to, and possibly made complete, by means of the observations of other collectors. To this end I describe a base silver coin of Eanred in my

collection, and which is not included in the before-mentioned list—

Obv.—EANRED REX. Pellet within circle of dots.

Rev.—EARVINI. Pellet within circle of dots.

It will be noticed that the type is the same as that of No. 7 of Major Creeke's list, and which latter was issued by the moneyer EADVINI. I have no doubt but that the name of the moneyer on my coin is a corruption of that on his. There is also the same mixture of the Old English *E* and the Roman *E*. I have in my collection a very fine silver styca of Eanred, with the name of the moneyer, VILHEAH, weighing 20 grains, similar to No. 12 in Major Creeke's list.

The late Mr. Lindsay also states, in his "View of the Coinage of the Heptarchy," that Mr. Haigh had seen, in the cabinet of Dr. Moore, of Preston, a sceatta of Eanred exactly resembling a styca, on which the moneyer's name was HVATRED.

In Hawkins, second edition, p. 74, are mentioned two silver stycas of Æthelred II., one of them resembling in all respects the ordinary styca; and with regard to these the learned author states his conviction that we can scarcely consider these anomalous pieces otherwise than as caprices of some one engaged in the mint, and that it is highly improbable that they should have formed part of the general currency of the kingdom.

In the late Mr. Cuff's collection were silver and base silver stycas of Eanred, of the moneyers Eardvulf, Eavini, and Eaduni (in the catalogue called EADVDI).

It would add usefully to the subject discussed if the stycas of the Archbishops of York were also considered in connection with the question raised. I do not know whether Major

Creeke was aware that some of the York stycas are also found in silver. There is so intimate a connection between Northumbria and that sea, and such a similarity of stylo in their coins, that any complete list should also extend to these.

I have two of Eanwald as follows:—

1. *Obv.*—EVNBVLD . VR +. Small cross.
Rev.—EDILVARD +. Small cross, base silver.
2. *Obv.*—EVNBVLD . V +. Small cross.
Rev.—EDILVARD +. Small cross, very fine silver.

In the Cuff collection were two base silver stycas of the moneyers Edilvard and Eadvulf respectively.

In addition to these Mr. Gill exhibited, at a meeting of the Numismatic Society, held on the 21st October, 1880, a base silver styca of Ulfhere.

Thus far I deal with the silver and base silver stycas which have been described or exhibited; but a careful examination of any large collection of stycas, such, for instance, as that in the British Museum, amply evidences the fact that the metal of which a great number are composed is more or less mixed with silver or billon.

In some the presence of the alloy is scarcely noticeable, in others it is more marked. There appears to be no design in this, nor anything capable of being reduced to a system. It is much more likely to result from accidents of the melting-pot, as hinted at by Mr. Evans, than from any intention on the part of the moneyer to issue a coin of a different denomination or even a mint curiosity.

If this theory be correct, it is obvious why so few stycas of fine silver have survived to our times. Their intrinsic being greater than their current value, secured their destruction more certainly than would the mere lapse or

time. If they were really sceattas, more of them would, in the ordinary course of events, have been hoarded and discovered in company with the many thousands of stycas found at Kirk Oswald, Hexham, and other places.

A further argument on the subject is provided by the famous silver penny of Eared, in the collection of Mr. Rashleigh, which, on the balance of evidence and probabilities of the case, might be regarded (if it can be considered a Northumbrian coin at all) as what would have been the form of the silver money of the country, if it had been determined to have a silver currency.

At the time when stycas were, practically, the only recognised coins of Northumbria and York, the neighbouring kingdoms used the Saxon penny, and it is only natural that at that period of time this would have formed the prototype of any attempted innovation in the northern districts, and I do not know why Mr. Rashleigh thought it necessary to endeavour to attribute a French origin to the type of his coin. In the same way it may be suggested that had either of the kingdoms of Mercia or East Anglia desired to avail itself of a copper currency, the coins issued with that intention would have borne some resemblance to the northern stycas.

It is easy in matters of this description, and where absolute evidence is wanting, to form theories of more or less probable a character; but I think that it is not unlikely that silver pennies were interchangeable with the ordinary Northumbrian money, although in what proportions and upon what basis remains to be ascertained. It would be difficult to imagine that, at the period when these were current, there were no commercial or pecuniary relations between the various kingdoms.

If such relations existed, it would be equally difficult to

determine the ways and means employed without the adoption of some such theory as that propounded by me, and which, if carried to its full extent, leads to the inevitable conclusion that the silver pennies of Mercia, East Anglia, and of the West Saxons were, in the time of Eanred, more or less known, and perhaps familiar in use, among the Northumbrians and other north-countrymen; and in connection with this portion of the matter it must not be forgotten that Eanred was a contemporary of Coenwlf, Ethelstan I., and Egbert, who were respectively monarchs of those kingdoms at that period.

The art displayed on the silver pennies of Offa, the predecessor of the first mentioned of those kings, was not surpassed by that displayed on his coins by any preceding or subsequent monarch of either of the kingdoms named, and the coins of Coenwlf and Egbert were certainly not much better or worse than the silver coins of the later Northumbrian kings, such as Regnald or Anlaf.

The Northumbrians, when adopting the same metal, would in like manner have been imbued with the spirit of imitation so far as the types of their neighbours were concerned, and this, in effect, was the course which events subsequently took. What is stated of the Northumbrians applies with much greater force to the Archbishops of York, who, by reason of their more frequent intercourse with the world, and their greater learning and civilisation, would have been more likely to create new and improved forms of currency.

It may be asked why, under those circumstances, the question of changing the form of the styca should not have, for the same reason, become a subject for consideration in the archiepiscopal see. On this point I can only remark that it is one thing to change an old form in

dealing with an established institution, and another to adopt a new one in dealing with a proposed innovation.

There are not extant any chronicles connected with Northumberland or its history from which any light can be derived on the subject of the coinage; but I venture to think the considerations I have above set forth tend to show that, if a silver currency had been proposed to be adopted in the time of Eanred or his successor, the type of such currency would have approached, even if it had not been identical with, the type employed in other parts of Britain.

Inferentially, therefore, I conclude that the form of a silver styca would not have been adopted for that purpose.

H. MONTAGU.

V.

THE HUMAN HAND ON HIBERNO-DANISH COINS.

THE human hand as a symbol is rare on Hiberno-Danish coins. The bones of three human arms, forearms, and hands are represented in the form of a tribrach on very few coins, and the bones of a hand only on a small number.

Another symbol which is usually denominated a hand appears on a large number of Hiberno-Danish coins. It consists of an upright line having three, four, or six parallel lines connected with it, which is more like a branch with linear leaves than a hand. It is placed on the reverse of the coin in one angle, or more frequently in two alternate angles of a double cross, each limb of which terminates with three crescents.

A more elaborate description of these varieties of type would fail to convey to the reader a distinct conception of the difference in form of the symbols and of their position on the coins.

Some of these types were first published by Mr. Lindsay;¹ but they are not represented in his plates with sufficient accuracy, and his book is now out of print.

It is therefore desirable to exhibit in one view all the varieties of the hand type in the Royal Irish Academy, and the most convenient mode of commenting on them

¹ "View of the Coinage of Ireland," 4to, Cork, 1839.

will be first to describe in succession the accurate representations of ten coins which are engraved in the accompanying plate (Plate III.).

FIG. 1.

Obv.—A skeleton hand with fingers expanded on the king's neck; the significance of this symbol is established by the hands on figs. 9 and 10; a cross pommée before the king's face.

Rev.—A long double cross, each limb terminated by three crescents, a small pellet in each angle of the cross.
Wt. 14 grs.

This coin closely resembles the one published in Lindsay, pl. ii. fig. 30, and appropriated by him to Regnald III., A.D. 1125. The legend on the reverse is almost identical with Lindsay's coin.

I have given this coin the first place in the series because the type of its reverse, although the legend is unintelligible, corresponds with the acknowledged coins of Sihtric III., who was the first to establish a mint in Ireland.

FIG. 2.

Obv.—This rare type is remarkable for the position of the fleshy hand with the thumb applied to the king's nose.

Rev.—Long double cross, with a small pellet in two alternate angles, and the branch-like symbol with four leaves in the other alternate angles.

Wt. 16.4 grs.

Another coin of this type, but from a different die, published by Lindsay, pl. ii. fig. 29, is in the Royal Irish Academy, and it has on the king's neck a pellet which is omitted in the engraving. Weight 16.3 grains. This coin is appropriated by Lindsay to Regnald III.

Mr. Walker, in his commentary on the Hiberno-Danish coins published in Camden's "Britannia," fig. 9, tab. iv., describes the branch-like symbols on the reverse as "two hands in the opposite angles of the cross" (second edition, fol. 1722, vol. i. p. cxviii.).

Simon, in his description of a coin appropriated by him to Ifars (pl. ii. fig. 34), says it has "what Mr. Walker calls a hand in two opposite quarters of the cross" ("Essay on Irish Coins," 4to, 1749, p. 11).

Mr. Lindsay, in his description of coins which he considers to be the first type of the coins of Sihtric III., includes ruder coins with unintelligible legends, which weigh only from ten to eighteen grains, a few of which "bear, in two angles of the cross, and sometimes in only one, a rude figure, supposed by some to be a hand, but this figure, although very common on Hiberno-Danish coins, is very seldom found on the coins of Sihtric" (p. 11). Mr. Lindsay adopts Walker's supposition and in table v. of the legends of the Hiberno-Danish coins he employs what he calls the "Irish type—hand in one quarter," or "hand in two quarters" of the cross, to distinguish the "varieties of the coins of Sihtric IV., 1034."

FIG. 3.

Obv.—Skeleton hand on the king's neck like fig. 1, and instead of a legend consisting of letters it has many straight strokes.

Rev.—A branch with four leaves in two alternate angles of the cross. In the unintelligible legend of nine letters the letter N is repeated six times in succession and also as the final letter. This coin is in the Royal Irish Academy, it weighs 18.5 grains, and is published by Lindsay (Supplement, pl. ii. fig. 84), who appropriates it to Regnald III.

Mr. Lindsay, in support of his appropriation of the

three preceding coins, saye, "That the coins bearing the name of Rendon or Nonden, belong to one of the Regnalds is, I believe, unquestionable; but to which of the Hiberno-Danish princes of that name they are to be assigned is perhaps the most perplexing question that could be asked, relative to the ancient coins of Ireland" (p. 15). He also observes, "The N, as in Nenden, and a great number of the Irish coins, being used as R, and often also in place of other letters; and if correctly appropriated would leave but little doubt that these coins belong to Regnald III., who reigned from 1125 to 1147" (p. 16).

A reference to the accompanying plate will enable the reader to test the accuracy of Mr. Lindsay's interpretation of the letters and straight strokes which occupy the place of legends in figs. 1, 2, and 3.

FIG. 4.

The chief difference between this coin and fig. 3 consists in the hand on the neck being turned downwards. It has more letters on the obverse, and one-half of the legend on the reverse is similar to fig. 3. Weight 13.1 graina. This variety of the hand type is not mentioned by Lindsay.

FIG. 5.

A branch having only *three* leaves terminated by pellets in only one angle of the cross, of which the other angles are blank. Weight 17.3 graina. This rare variety of the branch is not noticed by Lindsay.²

² Since the accompanying plate was engraved, I discovered in the cabinet of the Royal Irish Academy a Hiberno-Danish coin similar to the type of fig. 3. Instead of a skeleton hand

FIG. 6.

A branch having only three *pointed* leaves in one angle, a small linear cross or pellets in the other angles of the cross. Weight 16·9 grains. Not mentioned by Lindsay.

FIG. 7.

A branch with four leaves terminated by pellets in one angle, and a linear cross or pellets in the other angles of the cross. Weight 15·9 grains. Coins of this type are published by Lindsay, pl. ii. figs. 44, 45, 46, and 47, and are by him classed as "Uncertain."

FIG. 8.

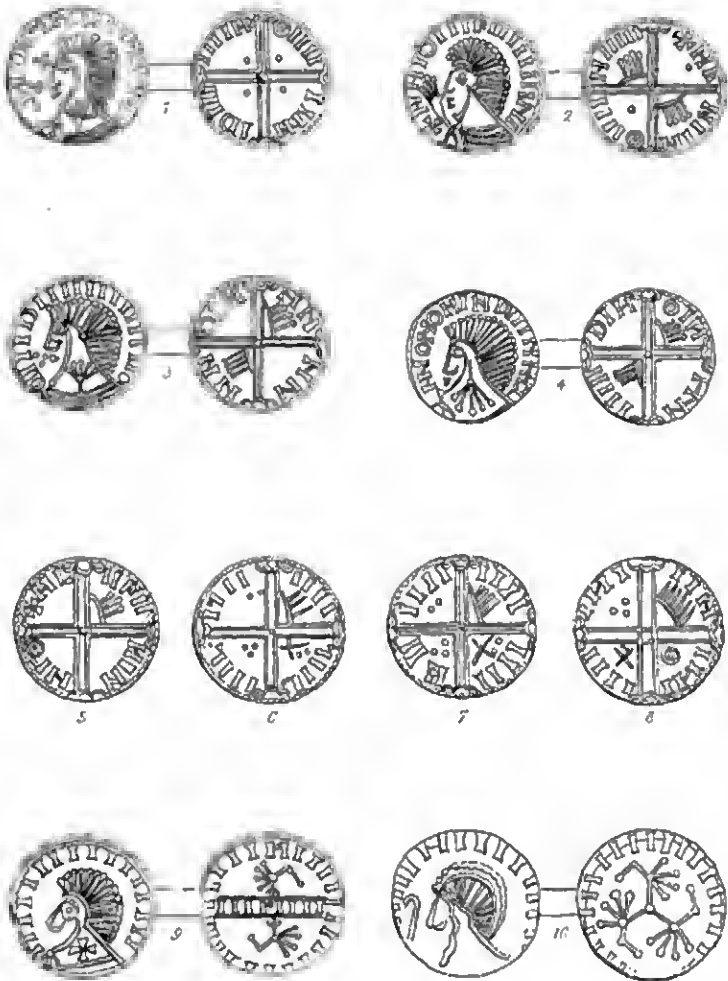
A branch with *six* pointed leaves in one angle of the cross. It has an annulet with a pellet in its centre in another angle, and in other particulars it bears a close resemblance to figs. 6 and 7. Weight 11·2 grains. This very rare variety of the branch is not mentioned by Lindsay.

FIG. 9.

Two human upper extremities like those on fig. 10, one above and the other below a transverse band with straight lines upon it. Weight 14·8 grains.

This coin is similar to one found at Glendelach, in the county Wicklow, in 1639. The figure of a coin of this type, published by Simon, pl. i. fig. 12, is a copy of the woodcut first published by Ware in 1654 ("De Hibernia et Antiquitatibus ejus Disquisitiones").

on the king's neck, it has a branch with three pointed leaves like that on fig. 6; and on the reverse a branch with four leaves, terminated by pellets in two alternate angles of the cross, and a pellet in each of the other angles. Weight 14·2 grains.



F. J. Leas.

A. Smith del.

HIBERNO-DANISH COINS.

FIG. 10.

A tribrach of three human upper extremities, each consisting of the bones of an arm, forearm, and hand, with fingers expanded, the three thumbs meeting at a central point; straight lines instead of a legend. Weight only 8·5 grains.

Fig. 51 in Lindsay's pl. iii. is a variety of this type, having in the centre of the reverse a pellet within a circle to which the three thumbs are attached. It is properly classed as "Uncertain."

It is very improbable that the fleshy hand on the obverse of fig. 2 and the branches with four leaves in two alternate angles of the cross on its reverse have the same signification as symbols.

There is some resemblance between the fingers of the hand on the obverse and the branches on the reverse; but Mr. Walker, who first described the latter as being hands, had not seen a Hiberno-Danish coin bearing a perfect hand or a skeleton hand. His appellation, however, has been adopted by Simon and Lindsay, and no one, to my knowledge, has dissented up to the present time. The signification of the five radiating lines on the obverses of figs. 1, 3, and 4 would be questionable were it not for the demonstration that it is a skeleton human hand, which is furnished by the skeleton arms, forearms, and hands which are represented on the reverses of figs. 9 and 10.

The branch-like symbol with four leaves, called a hand by Mr. Walker, appears in one, or more frequently in two, angles of the cross on the reverse of a large number of Hiberno-Danish coins, and Mr. Lindsay correctly observes that the rude figure called by some a hand (which name

be adopts in his tables of the "Descriptions and Legends of Hiberno-Danish Coins") is very seldom found on the coins of Sihtric III. (p. 11).

The workmanship of Sihtric's coins is superior to all others, and the intelligible legends on them furnish the only complete evidence of the coinage of money in Dublin by a Hiberno-Danish king.

The fleshy hand on the obverse of fig. 2 is unmistakable, and it is very improbable that the symbol on the reverse is intended to represent a human hand. A similar symbol is on the reverses of figs. 3 and 4, each of which has a skeleton hand with expanded fingers on the obverse, and fig. 1 has a skeleton hand on the obverse, but there is not any symbol or particular mark on its reverse.

A branch with only three leaves (fig. 5) is found on a few coins. There are only three coins of this type in the Royal Irish Academy. The legend on each side consists of unintelligible characters, and is preceded by a cross patée.

There are five coins in the Royal Irish Academy which have a branch with three *acute* leaves (fig. 6). The branch with four leaves terminated by pellets, on fig. 7, occurs in two alternate angles of the cross on the reverses of figs. 2, 3, and 4. Fig. 8 has a branch with six leaves in one angle of the cross and an annulet in another angle; in other particulars its type corresponds with figs. 6 and 7. The letters of the legends on the obverses are arranged with remarkable uniformity, but are unintelligible, and are preceded by a cross patée; their reverses have only straight lines in place of letters.

Not one of the coins represented in the accompanying plate can be appropriated with certainty or even probability to any person or place of mintage, nor can its place in the chronological series be fixed with precision.

Sihtric III., King of Dublin A.D. 989 to 1029, is the only king whose coins are known with certainty. The chief guide for the chronological arrangement of all Hiberno-Danish coins after his time must be the consideration of the varieties and analogies of types, when legends are unintelligible, and when straight lines are substituted for letters, as in figs. 3, 6, 9, and 10 in the plate.

The legend ✠ IIIITREIDIFIH on the obverse of fig. 5 presents some of the elements of the name Sihtric, and the coin may possibly belong to Sihtric IV., King of Dublin A.D. 1034 to 1041. It weighs only 17·3 grains, and the branch-like symbol does not appear on the known coins of Sihtric III.

Fig. 10 has not a letter on either side, and it weighs only 8·5 grains. It appears to be the latest in the series, and is probably contemporary with the Irish bracteates of the close of the twelfth century.

The chief object of this communication is to stimulate further investigation for a satisfactory explanation of the signification of the human hand, and also of the branch-like symbol which appears on so many of the Hiberno-Danish coins found in Ireland.

AQUILLA SMITH.

20th November, 1882.

VI.

COINS OF THE EAST INDIA COMPANY, IN BOMBAY, UNDER THE CHARTERS OF CHARLES II.¹

A curious commentary on the practical range and currency of these issues is to be gathered from the contemporary testimony of Tavernier, that adventurous traveller and experienced dealer in "precious stones," who resided in India during part of the reigns of Sháh Jahán and Aurangzeb. He was born in Paris in 1605 A.D., and died at Moscow in 1689. He tells us in his preface, "Si la première éducation est comme une seconde naissance, je puis dire que je suis venu au monde avec le désir de voyager"—and further, he claims our confidence in the terms, "ainsi j'ai vu avec loisir dans mes six voyages et par différens chemins toute la Turquie, toute la Perse, et toutes les Indes."² His memoirs were only written out from his notes, by others, after his return to

¹ Portions of this paper have already been printed in the *Indian Antiquary* of Nov., 1882, p. 313.

² The earliest edition of his works appeared in Paris in 1676, with frequent reprints. Our references here generally refer to the translation "made English by J. Phillips," of London, 1678. Harris's *Voyages*, 1764, vol. i., p. 810, reproduces much of the text, and Pinkerton, 1811, vol. viii., gives the chapter on Diamonds, &c.

Europe,³ so that it is often difficult to fix the precise date to which he refers for any special incident. He was in England so early as the time of James I., and we find him, after many wanderings, at Agra in 1641 A.D., and again in 1665 A.D., when he was invited by the Great Mogul himself to examine the hereditary crown jewels, which he was subsequently able to describe in full detail, for the benefit of the European world, claiming to be the first Franc who had been permitted to see and handle these choice gems of the Orient.⁴

The following passages represent his leading remarks on the early English coinages in India.

"Figure 1 and 2, plate p. 5, is the money which the English coin in their Fort St. George or else at Madraspatan, upon the coast of Coromandel. They call them *Pagods*, as those of the Kings and *Rajas* of the country are called. They are of the same weight, the same goodness, and pass for the same value. Formerly the English never coined any silver or copper money. . . . But since the present King of England married the Princess of Portugal, who had in part of her portion the famous port of Bombeye, where the English are very hard at work to build a strong Fort, they coin both silver, copper, and tinn [lead?]. But that money will not go at Surat, nor in any part of the Great Mogul's dominions, or in any of the territories of the Indian Kings; only it passes among the English in their Fort, and some 2 or 3 leagues

³ *Les Voyages de Tavernier* ont été rédigés d'après ses propres notes, en partie par Chapuzeau, son ami, et en partie par Daulier Des Landes, qui l'a accompagné dans l'un de ses voyages.—*Trésor de livres rares et précieux*, Graesse, Dresden, 1867. S.V.

⁴ Utrecht, edit. 1712. Book II., chap. x., vol. ii., p. 277.

up in the country,* and in the villages along the coast; the country people that bring them their wares, being glad to take that money; otherwise they would see but very little stirring. . . ."

As regards the first part of this quotation, it would seem that the Portuguese and Dutch had already introduced a system of imitating the native currencies for the mere purpose of facilities of commerce,⁵ in which practice we wisely followed them.

As a general rule, the nations of Southern India were more inclined to accept the adjudication of the money-changer, than to give credence to any royal stamp: in short, they preferred the tests of *scales* and the *cupel* to any impressed authentication of the representatives of the King's Mint. Ferishtah has preserved a curious record of how, on the conquest of the Dekhan, the Muhammadaus were much put out by the pertinacious local habit of submitting their new money to the arbitrament of the crucible and its immediate reconversion into current pagodas. The motive for this was imagined by the conquerors to have been due to the religious zeal of the Hindus, who were supposed to desire to perpetuate the sacred emblems of their creed in supersession of the pious legends and repetitive quotations of Islâm,⁶ but it seems much more reasonable to infer that these reconstructive measures were prompted by

* Tavernier, pp. 6, 141. "Fig. 5 and 6, plate p. 5, is a *roupy* of silver, which the Hollanders coin at Pelicate, being the same weight as those of the Great Mogul." The pagodas of the Hollaanders were "better gold by 1 or 2 per cent." than those of the English.

⁵ Ferishtah, *Persian Text*, Bombay, lithographed edition, vol. i., p. 587; *Chronicles of the Pathân Kings of Dehli*, by Edward Thomas, London, Trübner, 1871, p. 248.

the aim of securing fixity of value, in the numismatic form usually accepted by the masses; sanctioned alike by the ancient guilds of the goldsmiths and *Sarráfs*, whose responsibility for attestation marks is maintained with some stringency to this day.

"The Portugals," in the time of Tavernier, had passed beyond mere local issues, and coined fine gold, with European devices,⁷ for the dependencies of Goa, and they also had "Silver Pardos" [Patacas] and "a great quantity of small copper and tinn money, not much unlike that of the kings already mentioned."⁸

We can complete the incidental details of Tavernier from our home annals, and can produce specimens from our own authorised mints, which will probably suffice to explain why the money we first issued at Bombay did not find acceptance outside of our own limited domains on the Western coast.

Charles II. came to the throne in A.D. 1660. His marriage contract with Catherine, the sister of Alphonso VI. of Portugal, was arranged late in 1661, and completed in or about May, 1662. Under its terms he obtained the cession of the Island of Bombay, which was nominally made over to the East India Company on the 27th March, 1668,⁹ and finally passed into their possession on the 23rd

⁷ These were known by the name of St. Thomas. Tavernier gives an engraving of a specimen—*Obverse*, the arms of the king in a shield, with G. A. at the sides, and LEX PORTVGALLÆ in the margin. *Reverse*, figure of a man, with date 1660. Margin ST. THOME.

⁸ Tavernier, p. 13.

⁹ The grant bears date in 1668. Bombay was to be held [by the Company] of the King in free and common soccage, as of the manor of East Groenwich, on the payment of the annual rent of £10 in gold, on the 30th September in each year."

of September of that year, with its then revenue of a total of £2,833 per annum, and the King's garrison of two companies of Foot, who volunteered into the "Company's Service, and thus formed the first nucleus of the military establishment at Bombay." ¹⁰ "In 1671, Bombay rising in importance, a mint was ordered, and the building of two ships and two brigantines commenced upon." ¹¹ "In 1676 (28th Charles II.) by the King's letters patent dated 5th October, a mint was authorised at Bombay to coin Rupees, Pice, and Budgrooks" (*badagá-ruká*, $\frac{1}{16}$ of an *áná*), which should be current not only "in the Island, but in all the dependencies of the Company in the East Indies." Of course, it is somewhat venturesome to speculate on exchanges upon such limited materials as the available coins afford. But it would seem that they essentially confirm and explain Tavernier's statement of the non-currency of earlier Bombay issues outside the island, a fact, indeed, which is virtually admitted by the King's letters patent of 1676. They, moreover, appear to support the inference of the 2s. 3d. rate of exchange per rupee, which our own countrymen clearly looked upon as the normal tariff. I have had occasion to examine the question of the worth of English money as against Indian metallic values elsewhere; but this much may be repeated here, that the Company, in the first instance, clearly underrated the value of the local

Mill's *History*, vol. i., p. 97. See also—Hume, *Hist. England*, vol. vii., pp. 849, 878, &c.; Macpherson's *Annals of Commerce*, 1805, vol. ii., p. 502; Harris's *Voyages*, vol. i., p. 898.

¹⁰ *Chronological Table of European and British connection with India*, compiled by Capt. H. B. Henderson. This admirable résumé was first published, in Prinsep's *Useful Tables*, as an appendix to the *Journal of the Asiatic Society of Bengal*, vol. iv. for 1835, p. 153.

¹¹ Bruce's *Annals*, pp. 280, 392.

rupee, as may be seen by comparing the weight of No. 1, or the Company's coin of the 7th year of their Charter of 1668, = A.D. 1675, with the increased weights given to the subsequent issues Nos. 3, 4, bearing the Royal Arms.¹² A parallel illustration of the higher demands of the Indian Imperial mints may be quoted from our Num. Chron., 1882, p. 323, where we find the conquering Nâdir Shâh assuming 173·3 grains enough for a Peshâwar coin, but even in his hour of triumph admitting that the Dehli standard demanded the higher figure of 178·1 grains.

I have selected the eight subjoined examples of Indian money issued during the reign of Charles II., and added a single specimen of the Bombay rupees of James II. of 1687, which reverts to the arms of the East India Company. The date of this coin marks an epoch in the annals of the Western presidency. After the removal of the seat of Government from Surat to Bombay in 1686, the latter is stated to have been "elevated to the dignity of a Regency, with unlimited power over the rest of the Company's settlements."¹³

CHARLES II.



¹² Jahangir's Rupees of the *Ahmedabad* Mint weigh 176 and 175½ grains: Marsden, p. 167. Shâh Jahân's *Surat* Rupee also reaches 176 grains: Marsden, p. 699.

¹³ Mill, i. p. 121.

1. *Obv.*—Centre— MON :
BOMBAY
ANGLIC
REGIMS
A° 7°

Margin—A : DEO : PAX : & INCREMENTVM.

Rev.—Centre, shield, with the arms of the East India Company. Above, two rosettes at the sides; in the middle, two lions and two *lis* quartered. Below, three ships. Margin—HON : SOC : ANG : IND : ORI :

Silver, Wt. 177·8 grs. Date *Anno-septimo*, 7th year of the charter. British Museum.

2. *Obv.*—Centre— THE
RUPEE OF
BOMBAY

Above one, below two, rosettes. Margin—1677.
BY AUTHORITY OF CHARLES THE
SECOND.

Rev.—Centre, the Royal Arms of England, in a shield; viz. three lions, the Scottish lion, the three *fleurs de lis* of France, and the Irish harp. Above the shield a crown. Margin—KING · OF GREAT ·
BRITAIN · FRANCE · AND · IRELAND.

Silver, Wt. 167·8 grs. Date, A.D. 1677. British Museum.



3. Similar type and legende to No. 2.

Silver, Wt. 168·2 grs. Date, A.D. 1678. Edge milled.¹⁴
B.M.

¹⁴ The system of milling was first introduced into the English mint by Blondeau, in April, 1662, and the first milled shilling was struck in 1663. Rading, xxxiv. 12; Hawkins, pp. 213, 218.

4. Similar types and legends to No. 2.

Silver, Wt. 198·2 grs. Date, A.D. 1678. Edge plain, B.M.

5. *Obv.*—Centre—
MOET
BOMBAY
ANGLIC
REGIME
A° D 9°

Margin—As in silver coins? Traces of INCREME?

Rev.—Centre, shield, with the arms of the E. I. C. above; dotted stars, in place of rosettes, at the sides; in the middle, two *fleurs de lis*, and two compartments filled in with dots. Below, three ships. Margin—illegible traces of the letters SOC: ANG:

Copper (pico).¹⁵

6. *Obv.*—
CAROLVS A
CAROLO

Rev.—
REX
BRITANNIA.

Restruck with the die for the silver rupees, No. 2 above.

A farthing of Charles II. Date, A.D. 1674. B.M.

7. Types and legends as in the silver rupees.

Lead. A.D. 1768. ? B.M.

8. *Obv.*—Centre, two linked C's, **IC** (the monogram of Charles the Second), with two or three dots at the sides.

Rev.—Centre, the ordinary standing figure of the Indian god (*Vishnu* ?)

Indian Fanam.¹⁶

¹⁵ Ruding, Pl. XV., No. 13, vol. v., p. 869.

¹⁶ Ruding, vol. v., p. 296; Plate VI., Suppt., figs. 16, 17; Pembroke, Pl. IV., T. 14; Leake, p. 376.

JAMES II.

9. *Obv.*—Centre— PAX
DEO

Margin—BOMBAIENSIS MONETA : 1687.

Rev.—Centre, shield, with the arms of the East India Company. Above, two rosettes and two dots at the sides; in the middle, two lions and two *fleurs de lis* quartered. Below, three ships and three small stars.

Silver, Wt. 179 grs. Date, A.D. 1687.¹⁷

NOTE ON THE INDIAN EXCHANGES OF THE PERIOD.

A controversy has lately been raised in India as to the exchange value of the rupees of the Dehli Moguls, as compared with the English money of the period—and perhaps these quasi-English coins may aid in ultimately determining this question. One of the arguments advanced for the reduction of the then *par* value of the rupee to less than two shillings—which rate I had recently adopted for mere facility of conversion—has been based upon the returns given by foreign writers in *French livres* and other indeterminate Continental money estimates. The selection of these tests, however, does not appear to have been fortunate, inasmuch as we can fix the relative values from more direct evidence. For instance, the English translator of Tavernier, in 1677,¹⁸ in his Table of Values, gives the Rupee of Gold as £1 11s. 6d., and the Rupee of Silver 2s. 3d. In the same way, the English editor of Bernier's work¹⁹ estimates the

¹⁷ Rnding, Pl. XV., fig. 12.

¹⁸ Table prefixed to *The Persian Travels* of J. B. Tavernier, London, 1677.

¹⁹ Second edition, London, 1676, vol. ii., p. 164.

rupee at 29 pence, and so converts the sum of six *crores* of rupees into $7\frac{1}{2}$ millions of English pounds.²⁰ Harris, in 1764, in recapitulating the authorities collected by Ramusio, goes beyond this, and fixes the rupee at 2s. 6d. Thus, in giving the totals of Aurangzeb's Revenues at 1207,18,76,840 *dāms* (at 40 to the rupee), or rupees 30,17,96,864, he estimates these sums in English money at £37,724,615.²¹

The next series of definitions of exchange rates consist, for the most part, of the contemporary testimony of Englishmen, who probably carried British shillings to India, and there practically ascertained what they would go for. The first on the list is the eccentric Thomas Coryate, who defines the Mogul revenues in 1615 as "40 millions of crowns of six shillings each." We need not here attempt to reconcile these vague totals, as in another place he allows us to infer that he places the rupee at 2s., in defining a *lack* (or 1,00,000) at £10,000 sterling.²²

Terry, in 1616, speaks of the rupees as "of divers values, the meanest being worth 2 shillings, and the best about 2 shillings and *nine* pence,"²³ an estimate which is accepted by Do Laët in "*Rupias . . . quæ communiter valent duos solidos et novem denarios Angl. interdum*

²⁰ In the Appendix to vol. iv. of this edition, p. 175, Bernier adds, "Soms particulars forgotten to be inserted in my first Book," and therein defines the rupee as "equivalent to 29 or 30 pence." Bernier himself seems to have said at p. 59, vol. iii., "I have said elsewhere that a rousis is almost equivalent to half-a-crown."

²¹ Harris's *Joyages*, vol. i., p. 652, London, 1871, pp. 82, 49, and note p. 50; *The Revenue Resources of the Mughal Empire*, by Edward Thomas. Trübner, London, 1871, p. 32.

²² Coryate's *Cruicities*, edition of 1776, 6 vols. 8vo., and Purchas, vol. i., p. 694; Kerr, vol. ix., pp. 422, 428.

²³ Purchas, London, 1625, vol. ii., p. 1464; Kerr, vol. ix., p. 292.

etiam tantum duos.”²⁴ Finally, Sir Thomas Herbert, in his “Some years of Travaile, begunne in 1626,”²⁵ tells us “a Mahmudi is 12 pence, a rupee 2 shillings and three pence.”

But with all this, we must remember that the English shilling was little better than a token, and a very dubious measure of value. Twelve pence in silver instead of being equal to *one-twentieth* ($\frac{1}{20}$) of the standard pound, had been very extensively reduced at this date, as will be seen from the Tables of English Silver Coins given by Macpherson,²⁶ Ruding,²⁷ and Hawkins.²⁸ But this difficulty of relative values, as far as India is concerned, may possibly be disposed of by the parallel definitions, *in gold*, which we occasionally meet with.²⁹

On the other hand, the true estimate of value in India at this time was dependent upon, so to say, three concurrent standards: (1) the copper, which had not yet lost its early status as a primary arbiter of values—seeing that the revenues of the State were still told, and extensively paid in, copper *dams*; (2) the silver, which in the form of tankas and rupees had been gradually taking the place of the lower metal; and (3) the gold, which, in the increase of the material riches of the land, had already acquired an officially recognised ratio as against silver.³⁰

²⁴ *De Imperio Magni Mogolis, sive India Vera*. Lugd. Bat. 1631; epitomized in the *Calcutta Review*, October 1870, and quoted in the *Revenue Resources of the Mughal Empire*, pp. 19, 22.

²⁵ London, 1634, p. 41.

²⁶ *Annals of Commerce*, London, 1805, vol. iv., Appendix ii.

²⁷ Ruding, vol. ii., pp. 70, 71.

²⁸ *The Silver Coins of England*, London, 1841, p. 7.

²⁹ Tavernier, *supra cit.*, p. 9, and Sir T. Herbert, *Persian Travels*, London, 1676, p. 41.

³⁰ *A'in-i-Akhari*, Gladwin's edition, i. 37; Bloockmann's Translation, p. 27. *Chronicles of the Pathan Kings of Dehli*, p. 418.

INDIAN SILVER.

The origin of the Indian *rupee* may be traced up to very early times, in the Aryan *ṣataraktika*, or *ṣatakrishnala*, the even one hundred *rati* weight, which formed the basis of the standard gold and silver pieces of the early Pathān Kings of Dehli (A.D. 1228), each of which weighed 100 *ratis*, or 175 grains.³¹ Muhammad bin Tughlak, in A.D. 1324, reverted to the local weight of Manu,³² the *kārsha* or *suvarṇa* of 80 *ratis*, or 140 grains, for his silver standard and simultaneously raised the weight of his gold pieces to 200 grains, which measure seems to imply an official re-adjustment of the relative values of the two metals. Some uncertainty in the mint issues continued until Shīr Shāh reformed the Indian coinages and introduced a new silver piece, now definitively called a *rupee*, of 178 grains.³³ The great Akbar followed the same standard in weight, but claims justly to have improved the fineness of the metal.³⁴ And we have extant rupees of Shāh Jahān weighing 178 grains, and numerous specimens of 177·5 grains.³⁵ To judge by the returns of his gold coinage, some of the examples of which reach 170·7 grains, his rupees must have ranged at a better average than those of his predecessors.³⁶

³¹ *Pathān Kings of Dehli*, pp. 3, 134, &c.; *Numismata Orientalia*, "Ancient Indian Weights," London, 1874, vol. i, pp. 12, 36, 70.

³² *The Institutes of Manu*, by G. C. Haughton, London, 1825; chap. viii., p. 186.

³³ *Pathān Kings of Dehli*, p. 405.

³⁴ Prinsep's *Essays*, London, 1858; p. 43. Akbar's Gold Muhar of 186·60 grains, is pure gold; so is the average bullion return at p. 50.

³⁵ Marsden's *Numismata Orientalia*, London, 1823, pp. 644, 649, &c.

³⁶ Prinsep's *Essays, Useful Tables*, pp. 43, 50.

Tavernier has a curious notice of the copper and smaller money current in India in his day, which is perhaps worth preserving :—

“The Indians have also a sort of small copper money which they call *pecha*, which is worth about $2\frac{1}{2}$ of our *liards*, a *liard* being the fourth part of a *sous*. There is also $\frac{1}{2}$ *pecha*, 2 *pechas*, and 4 *pechas*.

“According to the custom of the province where you travel, you have for a *roupy* of silver more or less of these *pechas*.

“In my last travels a *roupy* went at Surat for 49 *pechas*. But the time was when it was worth 50, and another time when it went but for 46. At Agra and Gohanabat (Dehli) the *roupy* is valued at 55 and 56 *pechas*, and the reason is because the nearer you go to the copper mines, the more *pechas* you have for the *roupy*.”

Cowries, too, were subject to similar laws of distance from the Maldives. Near the sea they were rated at 80 to the *pecha*, at Agra they went for 50 to 55 per *pecha*. So also with the bitter almonds, which made up the small chango of the Western coast, whose tariff was regulated by the productiveness of the uncultured trees in the deserts of Laristan.

INDIAN GOLD.

The value of gold in Asia seems from all time to have been largely affected by geographical facilities, proximity to sites of production, ease of transport, and other incidental circumstances.³⁷

³⁷ Marco Polo gives the varying rates, in different localities, as gold to silver, 1 : 5, chap. xli., xlii.; 1 : 6, chap. xl.; and 1 : 8, chap. xxxix.

The Southern Peninsula of India had, as it now appears, gold mines of its own, and ocean commerce brought it ever-ready contributions in exchange for its home products. In the North, the Bactrian Greeks were satisfied with bimal currencies of silver and copper, whereas their successors, the Indo-Sythians, utilised gold, to the exclusion of silver, in large quantities, and not only secured direct supplies of Roman gold coin, but even imitated the devices and seemingly restruck many of the Imperial *denarii*.³⁸ The central kingdom of Kanouj continued, in modified forms, an extensive issue of that metal, which lasted till the Muhammadan conquest, and the later local types were even momentarily adopted by the foreign invaders.³⁹

Mahmūd of Ghazni's mints very early in his career reproduced Central Asian gold inscribed with Kufic legends, and the plunder of India from time to time contributed fresh supplies of that metal for his moneyer's needs.

The Pathān Kings of Dehli, as we have seen, coined both gold and silver in equal weights, each being as pure as the indigenous refiners could make them, but relative values had clearly to be readjusted as varying rates of metallic equivalents demanded. At first the scale of gold to silver appears to have been 1 to 8. In Akbar's time it was 1 to 9·4,⁴⁰ in Aurangzeb's reign 1 to 14.⁴¹ And at this rate of 1 to 14 our East India Company, in 1766, coined gold as 149·72 fine, to the rupee, containing 175·92 of pure

³⁸ *Jainism, or the early faith of Asoka*, Trübner, London, 1877, p. 68; *Journal, Royal Asiatic Society*, N.S., vol. ix., p. 220; *Proceedings, Asiatic Society of Bengal*, 1879, Pl. III.

³⁹ *Ariana Antiqua*, Pl. XXI., fig. 25. Prinsep's *Essays*, Pl. XXIV. fig. 8. *Numismata Orientalia*, vol. iii., 1882, p. 25.

⁴⁰ *Pathān Kings of Dehli*, pp. 282, 424.

⁴¹ Tavernier, pp. 20, 184; *Journal, Royal Asiatic Society*, vol. ii. N.S. 1866, pp. 159, 162.

silver.⁴² This proportion was not, however, found sufficient to secure the free currency of the new gold *muhar*, and in consequence, in 1769, a revised Government "Regulation" was passed raising the value of the gold *muhar* up to 190·086 fine, as against 16 rupees of the old standard of 1766,⁴³ of 175·92, above cited.

Finally, it may be mentioned, in connection with the later actualities of the East India Company's mintages and home exchange rates, that Stewart, in his "History of Bengal," (p. viii.) estimated the rupee at 8 to the £ sterling (*i.e.* 2s. 6d. per rupee), and practically illustrated its effect in citing "the sale in October, 1811, of 40 lakhs of rupees [Sicca ?] to the Bank of England for the equivalent sum of £495,527 sterling."

ENWARN THOMAS.

⁴² I omit the alloy in both cases.

⁴³ Prinsep's *Essays, Useful Tables*, pp. 72, 73.

NOTICES OF RECENT NUMISMATIC PUBLICATIONS.

The Types of Greek Coins, an Archaeological Essay by Percy Gardner, M.A., F.S.A., British Museum, Disney Professor of Archaeology in the University of Cambridge. Cambridge University Press, 4to, 1888.

The object of this work is to place before the serious student of Greek archaeology such a representative series of Greek coin-types as may afford him valuable aid in tracing the gradual development of Greek art, and, at the same time, serve as an introduction to the science of Greek numismatics. Although it is not primarily addressed to numismatists, we have no hesitation in affirming that there are few specialists who will not find in Professor Gardner's pages much suggestive matter and many new and original views.

The work is divided into three sections—(1) A Historical Introduction, containing chapters on the origin of coinage, the chief international currencies of the Greek world, the rights of coinage possessed by religious communities, cities, kings, and political confederations, on monetary alliances, such as the ancient leagues of the Achaean cities of Southern Italy and the later Greek leagues. (2) The Types of Greek Coins, their religious origin, and their symbolical character. (3) The Art and Mythology of Coin-types. In this section, which constitutes the main body of the work, the author divides the history of Greek art, as exemplified by coins, into six periods, and the Greek world, the field of his researches, into ten geographical regions. The first chronological period comprises the time from the seventh century B.C. down to the Persian wars, and is illustrated by coins of the early archaic style. Period II. extends from B.C. 479 down to the outbreak of the Peloponnesian war, B.C. 431, and exhibits the transition from archaism to early fine art, under the influence of the Aeginetan school of sculptors. Period III., B.C. 431—371, embraces the stirring times of the Peloponnesian war, the Sicilian expedition, the age of Dionysius of Syracuse, the fall of Athens, and the hegemony of Sparta. Throughout this time the coins, according to Professor Gardner, bear witness to the far-reaching

influence of Polycleitus and his school rather than to that of Pheidias. Period IV., B.C. 871—835, is that of the later fine art, of which in sculpture Praxiteles and Scopas were the leading exponents. Period V., B.C. 335—280, shows the beginning of the *Decadence*. This is the age of Alexander the Great and of the Diadochi, and is represented in sculpture by the famous Lysippus. Period VI., B.C. 280—146, is that of the rapid downfall of art on coins, a decline which may be traced in every department save one, that of portraiture, which now rises to the chief place of interest.

The coins on the beautiful autotype plates, sixteen in number, which accompany the work, are scientifically arranged in chronological and geographical classes, and afford an excellent series of *coups d'œil* of Greek art on coins in the above-mentioned periods in every part of the ancient world. Each plate is faced by a descriptive catalogue of the coins figured upon it, in which references to the pages of the text are given, where each type is critically examined and compared with other analogous works.

Professor Gardner must be congratulated on having produced a most valuable and original treatise, which will be indispensable to all who are interested in ancient art and mythology. The numismatist might have preferred to see the obverses and reverses of the coins placed side by side on the plates, as in the British Museum *Guide to the Coins of the Ancients*, but this would have interfered with the method of treatment followed in the text, and would certainly have derogated from the value of the book from the point of view of styles and schools of art which Professor Gardner has selected as the basis of his disquisition.

Die Münzen des Kaisers Aurelianus, seiner Frau Severina und der Fürsten von Palmyra. Special Studium von Theodor Rohde. Miskolz, 1882.

The author of this work divides his subject into three parts. In the first part he gives extracts with translations from the ancient authors, which may serve to illustrate the coinage of the period of which he treats. The second part contains a full and minute description of all the coins which have come under his notice, whether in his own or some other collection, or described in numismatic works. These are given in alphabetical order—that is, after the initial letter of the first word of the legend on the reverse. The third part, however, to numismatic science is the most important of all, as Herr Rohde therein arranges the coins of the reign of Aurelian in their chronological and geographical order. This task was not an easy one, but

it has been accomplished in a very complete and instructive manner. When the coin called the *argenteus antoninianus* had become only a copper coin washed with tin, and had driven out of circulation the old silver and copper coinages of the empire, mints were founded in most of the provinces. This system of local mints was not firmly established before the reign of Gallienus, and the coins themselves bore little or no direct evidence of the various places of mintage. The reforms of Diocletian at a later period supplied this want, as each mint stamped its initials on its coinage. The absence of such evidence renders a geographical classification before that period a most difficult task, and the only data are those of fabric and similarity of letters marking the succession of issues, and here and there an occasional letter, which may lead to the identification of the mint where the coin was struck.

Taking the divisions of the Roman empire as they existed in the middle of the third century A.D., Herr Rohde places the various mints at Rome, Tarraco, Lugdunum, Londinium, Siscia, Serdica, Alexandria, Antioch, Cyzicus, and Tripolis, and to each place he assigns upon the system mentioned its own coinage. He then proceeds to arrange the coinages of Aurelian in its chronological order, dividing the whole into three periods, viz. that of the accession, from A.D. 270 to 271, in which the coinage resembles in type and fabric the issues of the immediately preceding years; that of the first reform, A.D. 271 to 274, when Aurelian improved the standard of the coinage, and placed it upon a more equitable footing; and thirdly that of a continued reformation, A.D. 274 to 275, when the Emperor placed upon all his coins their real circulating value, and on most the place of mintage.

These few remarks give but a slight idea of the task which Herr Rohde has undertaken; and we must refer our readers to the work itself, which will well repay a careful perusal. As to the mints, it may be suggested that Herr Rohde might safely have added two others to his number, that of Mediolanum in the north of Italy, to which can be assigned those coins with the letters **PM, SM, TM, QM, &c.**, which have been attributed by him to the Roman mint, but which are of a different fabric from the coins of the capital; and that of Camulodunum, in Britain, at which place Carausius and Allectus both struck a large number of coins. The work, however, of Herr Rohde deserves the highest praise, as it clearly shows to students in numismatics that more is to be obtained from the study of Roman coinage than a mere classification of types and legends, and that, in fact, the coins not only confirm history, but serve also as independent evidence of events

and of the state of the empire, both politically and constitutionally.
H. G.

Erklärung der Abkuerzungen auf Muenzen der neueren Zeit, des Mittelalters und des Alterthums, &c., von F. W. A. Schlickeysen. Second enlarged edition, by Dr. Reinhold Pallmann and Dr. H. Droysen. Berlin. 1882. Pp. 498, and 2 Plates.

To those engaged in the study of modern and mediæval coins, the occurrence of legends reduced to their shortest and most unintelligible forms is one which is painfully familiar. Such a dictionary as that of Schlickeysen, enlarged as it is by its recent editors, will by them be regarded as an unspeakable boon. Not only will it be of use to those more especially interested in foreign, modern, and mediæval medals, but also to those who restrict themselves to the English series. For example, the somewhat mysterious inscription of BR . ET LVN . DVX S . R I . A . T . ET EL . on the coins of our Hanoverian dynasty is expanded into an intelligible form, and the G . S . L . C . P . G . of the pure gold coins of the Great Salt Lake City, receives its proper interpretation.

The initials of medallists and engravers are included in the list, and in this respect also the work will be found of great utility as a book of reference. At the end of the volume are given accounts of some of the abbreviations on Greek and Roman coins, as well as of those on modern Russian coins. The two plates are devoted to the various monograms adopted either by the engravers or those in whose honour or under whose direction the coins and medals bearing them were struck.

The *Zeitschrift für Numismatik*, Band IX. Heft 8 contains a valuable monograph on the Achaean League by Dr. Weil, in which, after tracing the history of its rise and growth, he gives a full and detailed account of the coins. On this subject much more is now known than when Mr. Leicester Warren and Mr. Finlay devoted their attention to it. Dr. Weil divides the coins into two series. In the older he places coins like that engraved on Plate VII. 4, of the thirteenth volume of the *Numismatic Chronicle*, which are without the name of a mint. In the later class he arranges the coins inscribed with the name of the mint. He abolishes altogether some of the old mints, such as Ægina, and inserts several which are of recent assignment, such as Dyme, Callista, &c. The attribution of many of the silver coins of the League must always remain more or less conjectural; no wonder, therefore, if some of Dr. Weil's assignments of silver coins—such, for instance, as those to Keryneia and Megalopolis—are somewhat questionable.

Band IX. Heft 4 contains the following articles:—

H. Dannenberg. On the coinage of Brandenburg.—Supplement.

J. Friedlaender. On the Paretz Find in the district of Potsdam, consisting of tenth-century German, Italian, French, English, and Arab silver coins.

A. Erman. On Arabian imitations of Greek coins, consisting of minute silver pieces with the head of Athena, the owl, the full-face female head of the Cilician staters, the head of the god Bes, &c.

F. Friedensburg. On the Mediæval coinage of Silesia.

S. A. Bergsee. On Norwegian and Danish coins.

Band X. Heft 1 contains:—

J. Friedlaender. The Acquisitions of the Berlin Coin-cabinet in the year 1881, from which we learn that the collection has been increased by the purchase of 51 gold, 222 silver, and 219 bronze coins, Greek, Roman, Mediæval, and Oriental. Among the Greek may be mentioned 8 gold, 21 silver, and 31 bronze Bactrian and Syrian, of great rarity, from the collection formed by Alexander Grant, Esq., of Obeltenham, while in India.

M. Bahrfeldt. On a Find of Roman denarii in Rumania.

F. Friedensburg. The Mediæval coins of Silesia.—Conclusion.

P. Lambros. Inedited coins of the town of Eriza, in Caria. The pieces here described are (i.) *Obv.* Head of Poseidon, bearded, which, trident, downwards. *Rev.* ΕΡΙΖΗΝΩΝ. Eagle on fulmen. Æ. 4. (ii.) *Obv.* ΑΥΤΟΚ. ΚΑΙ. Μ. ΑΥ. ΑΝΤΩΝΕΙΝΟΣ. Bust of Caracalla r. laureate. *Rev.* ΕΠΙ. ΕΡΓ. ΑΠΟΛΛΩΝΙΟΥ ΑΛΕΞ. ΕΡΙΖΗΝΩΝ. Helios riding on horse. Æ. 10.

J. Friedlaender. On a bronze medallion of Gallienus with the name of Marinianus, a member of the imperial family, and perhaps a son of Mariniana, the second wife of Valerian.

Band X. Heft 2 contains the following articles:—

A. Löbbecke. Select Greek coins from his own cabinet, rare or inedited.

A. Düning. On a Find of German sixteenth and seventeenth-century coins at Walternienburg.

Count Serge Stroganoff. On the discovery, in 1852, at Njine of about 200 silver coins of the Princes of Kief of the eleventh and twelfth centuries.

J. Friedlaender. On a tetradrachm of Gortyna, in Crete, struck by Q. Caecilius Metellus, b.c. 66—63. *Obv.* ΡΩΜΑΣ. Head of Roma, with the emblem of the Cæcili Metelli, an elephant's head, upon her helmet, and in front the monogram

KA (for *Kauκλιος*?). *Rev.* **FOPTYN**. Effigy of the Ephesian Artemis, with a bee and an elephant's head as symbols in the field. *At.* 247 grs.

Band X. Hest 3 contains :—

A. von Sallet. Miscellaneous contributions. (1.) On the dates on coins of the Tanric Chersones.. (2.) On the inscriptions **APIXO** and **ΘΥ** on the fish-shaped coins of Olbia. (3.) On a coin of Commodus Cæsar struck at Cæls in the Thracian Chersoneso, on the reverse of which is the inscription **ΔΙΑΝΑΕ ΔΑΥΦΕΝ ΑΕΛ ΜΥΝΙCΙΠΗ COELAN**. Artemis standing holding long torch and patera. The epithet Danphena applied to Diana is quite new, and perhaps a corruption of some such word as *δαφφανος*, a probable, though equally unknown, epithet of Artemis. (4.) Elæns in the Thracian Chersonese, inedited bronze coin. *Obv.* Head of Athena. *Rev.* **ΕΛΛΙΟΥ-ΣΙΩΝ**. Owl. (5.) Copies on coins of the Pheidian statues of Pallas Athena. (6.) The Judgment of Paris on coins of Scep sis. (7.) Bactrian coins. (8.) Trajan, the ancestor of the Gordians. (9.) Cybele on contorniates, and her Armenian and Cilician prototypes. (10.) Metrical inscriptions on Byzantine leaden bullae. (11.) A Laconian votive relief showing Asklepios seated with his usual emblems, the horse and the dog, beside him. The god holds in his hands a kantharos.

J. Friedlaender. A medal of Wilhelm Schntzper.

T. W. Greene. A medal of the Rappold family, by Tobias Wolff, goldsmith, of Breslau.

Count Ivan Tolstoi. On the Néjine Find.

M. Bahrfeldt. On a Find of Victoriati at Tarentum.

F. van Vleuten. On Roman coins found in the Rhine province, recently acquired by him.

A. von Sallet. On two Italian medals of Pietro Bembo, circ. 1520, and of Thomas Rangone (ob. 1577), physician and humanist, of Ravenna.

H. Dannenberg. On a Find of German mediæval coins at Meppen.

J. Friedlaender. Gottfried Leigehe, medallist (born at Freistadt, in Silesia, 1630, died in Berlin 1683), and some of his works.

B. V. H.

MISCELLANEA.

"Rose" M.M. ON IRISH MONEY, SIXTEENTH CENTURY.—In a paper entitled, "Have we no Irish Coins of Edward VI.?" [*Num. Chron.*, third series, No. 1, p. 60] I drew attention to

the Irish money of Elizabeth which bears the "harp" as a mint-mark [Simon, Pl. V., 100, 101, 102], as well as to those of Henry VIII.'s seventh coinage for Ireland, which bear that mark [Num. Chron., second series, vol. xix. p. 171]; because the use of this mark in these two reigns creates a strong presumption in favour of an argument that money so marked with the "harp," in an intervening reign, must be Irish. I add now, what I omitted to note then, how a like presumption arises as to money of Edward's bearing the "rose" mint-mark. The "rose" is found as a mark on Henry VIII.'s sixth coinage (struck after 1541), and again on Queen Elizabeth's earliest coinage for Ireland, coined by the commission granted to Sir Edmund Peckam, knight, and others, December 31, 1558 [Simon, Pl. VI., 116, 117]. Much the same is true of the "lie," only the use of the "lis," as a mark in Elizabeth's reign, followed after a longer interval (1601). The "lion," unknown on Henry VIII.'s Irish money, appears only on Elizabeth's English money, 1566—67. But three out of the four marks named in Elizabeth's proclamation (September 27, 1560) are thus shown to have been the mint-marks of Irish money in Henry's time and Elizabeth's time. What is the obvious conclusion to draw, if those marks appear on certain money of Edward's, which present to us great difficulties if they are classed with his English coins?

ASHMETON POWNALL.

UNPUBLISHED VARIETY OF NOBLE OF EDWARD III.—I have a noble of this reign reading on the obverse EDWARD × DEI × GRA × REX × ANGL × Z × FRAN × D × B. The contraction of the usual HIB or HYB to the single letter B is novel, and has not, I believe, been before noticed.

UNPUBLISHED VARIETY OF THE LIGHT NOBLE OF HENRY IV.—I also have a noble of Henry IV. coined after his thirteenth year, and which varies from the usual type in having an annulet on the side of the ship in juxtaposition with the usual trefoil.

UNPUBLISHED ROSE NOBLE OF EDWARD IV.—I have in my collection an unique and unpublished rial of Edward IV., the peculiarity of which consists in there being a small lis on the obverse of the coin after IB and one also before DNS. The mint-mark on the reverse is a sun and the weight of the piece, 119 grains. It is questionable whether these lis marks are mint-marks or not, as they are much smaller than the ordinary lis mint-mark on the two nobles of the first coinage of this

monarch, both of which are in the possession of Mr. Evans, and were described by him in the *Numismatic Chronicle*, vol. xvi. p. 88, and vol. xix. p. 8, respectively, and on which the mint-mark is of the same size and appearance as that on the coins of previous monarchs, and on the York rials of this reign. The introduction of a small lie is not a novelty in connection with the gold coins of Edward IV., as it occurs under the ship on the obverse of some of his half-rials.

H. MONTAGU.

"NATANTES NUMMI."—Bircherod¹ having given a description and engravings of nine Cimbric amulets, concave and made of thin gold, mentions Danish bracteates, which by the Germans were called light-penny, concave-penny, thin-penny, and "nummi patellæ in modum formati." The Danes also called them concave-money, and "natantes nummi," because if they were gently placed on water they would swim, "instar schyphi concavi." They were also compared to fish-scales, being very thin and light. The object of making them so thin was to render forgery with the baser metals more difficult. In commerce they were current as small coins, and are never mentioned in documents relating to payment of large sums.

A. S.

"DANDY-PRATS."—Leake, in his "Account of English Money,"² quoting from Camden's "Remains," says—"King Henry [VII.] is also said to have stamped a small coin called *Dandy-Prats*, but what sort of money this was we are not informed."

Sir J. Bowring, in "The Decimal System, 1854, p. 110," quotes a versified description of the aliquot parts of a shilling from a work mentioned in De Morgan, "Arithmetical Books," p. 81.

"A farthing first finds forty-eight,
An halfpenny hopes for twenty-four,
Three farthings eek out sixteen straight,
A peny puls a dozen lower;
Dick Dandiprat drewe eight out deade;
Twopence took six and went his way;

¹ Specimen Antiquæ Rei Monetariæ Danorum, 4to, Hafnise, 1701, p. 81.

² Third edit. 8vo, 1793, p. 181.

Tom Trip-and-goe with four is fled,
 But Goodman grote on three doth stay;
 A testine only two doth take;
 Moe parts a shilling cannot make."

Notes and Queries, 6th S. v., p. 179, March 4th, 1882.
 A. S.

DID SUEIN AS SOLE MONARCH COIN MONEY IN ENGLAND?—Ruding, not knowing where any coin of Susin was to be found in England, was under the necessity of reproducing in his Appendix, Pl. XXVIII., the engraving from a "rude drawing" in Bircherod's rare work,¹ in order to enable his "readers to form their opinion upon the subject," and with the exception of his quotation from Bircherod of the description of the silver coin, gives no more information about Suein than that "after Aethelred fled into Normandy, A.D. 1013, the Danish invader mounted the throne, and died within about seven months." (8rd edit. vol. i. p. 136.) Bircherod says, decidedly, "In Angliā cūsum fuisse hunc nummum a Suenone extremis sūæ ætatis temporibus nequiquam dubito;" and Ruding, without assigning any reason, gives his judgment that it is "evidently a Danish coin."

Ruding's very scant notice of Susin induces me to give as much of his personal history as I have been able to obtain.

Suein or Sweyn, in Latin Sueno, was baptized A.D. 988. When he grew up he joined the heathen pirates of the Baltic Sea, and relapsed into idolatry and heathen superstition. He rebelled against his father, Harald Blue-tooth, who was slain about the year 980, and whom he succeeded as King of Denmark. In his wars he was taken prisoner, and his treasury of gold and silver was exhausted by his ransom. He attributed his misfortune to the abandonment of his religion and rebellion against his father, repented of his crimes, and resumed Christianity. Finally he subjugated Norway, England, and other regions. So far Bircherod.

The following particulars have been collected from "L'Art de vérifier les Dates" (3rd edit., folio, 1788. Tome i. p. 796 at ii. p. 83). The Danes at the commencement of the reign of Aethelred invaded England, and continued from time to time to make frequent descents, and to commit great ravages. In 991

¹ Specimen Antiquæ Rei Monstariæ Danorum, p. 87. 4to, Hætnæ, 1701.

they defeated Athelred in a pitched battle, and he induced them to retire from England by giving a large amount of silver. Their success on that occasion led them to return in 994, when Susio, King of Denmark, accompanied by Olaus, King of Norway, made a descent on the English coast, and carried off a considerable amount of booty. Their fleets did not cease to desolate England up to the year 1001, when Athelred again paid a large sum to be delivered from the pirates, and he then established the tax known as Danogeld.²

There was a great massacre of the Danes in England when Swein's sister, Gunilda, who was married to an English lord, was slain, on the 18th of November, 1002, and Swein hastened to take revenge by fire and sword, and in 1005 he returned to Denmark. The Danes revisited England in 1012, and received a large sum of money to induce them to quit the country. They had hardly re-embarked when Swein returned with a determination to establish himself on the throne. Having reduced many districts, he besieged London, whence Athelred fled to Normandy, and the citizens having submitted, he took up his residence at the palace, and his followers elected him sole monarch of England. He died in 1015, at the age of seventy-seven.

Harald Blue-tooth, whose son Susio rebelled, fled to Normandy and was received with honour by Duke Richard, who never ceased in his efforts to aid and enable Harald to recover his throne, on which he was re-established, but did not long enjoy his restoration. Swein, forgetting the pardon granted by his father, entered into new plots against him, surprised him in a wood when attended by a few followers, and he was slain by an arrow, in the year 985, at the age of ninety years. Susio succeeded to the throne by election, and did everything in his power to abolish Christianity and to restore the superstitions of paganism.

A. S.

² Jacob's Law Dictionary, s. v.

VII.

RARE AND UNPUBLISHED COINS OF THE SELEUCIDAN KINGS OF SYRIA.

THE elaborate and careful catalogue of the rich series of the Seleucidan Kings of Syria in the British Museum is undoubtedly the most important contribution that has been made of late years to our knowledge of these interesting coins. The earlier works of such writers as Vaillant and Froelich may at the present day be safely discarded as altogether useless; and though the valuable treatise of Eckhel may be regarded as forming an epoch in this, as in almost all other branches of ancient numismatics, and laying a foundation of sober criticism, he did not possess sufficient materials for a full investigation of a class of coins which were in his day far more rare and more imperfectly known than they have since become. The well-known work of Mionnet, though merely a compilation, and very often not a careful one, has long constituted in this department of Greek numismatics the ordinary book of reference, and perhaps for the mere collector has adequately supplied his wants. But Mionnet was almost wholly destitute of that historical knowledge and critical faculty which is indispensable to the true numismatist, and his lists of coins are at the present day chiefly valuable for their notices of minor details, and especially for the numerous and varied monograms which are found on the coins of the earlier Seleucidan monarchs,

and which present so wide a field for conjecture, unfortunately with so little prospect of a satisfactory result.¹

Moreover, since the appearance of Mionnet's catalogue, of which the eighth supplementary volume containing the kings of Syria was published in 1837, many new types of this series have been discovered; and as the readers of the "Numismatic Chronicle" are well aware, researches of very recent date in the provinces of Central Asia have thrown considerable light upon their arrangement and attribution.² It is to be hoped that we shall gradually receive further additions to our knowledge from the same source. Meanwhile it is always useful to accumulate the necessary materials by bringing forward any interesting varieties that are not already known to numismatists, or at least have not already been figured. And if these varieties are not to be found in so important a collection as the British Museum, this circumstance in itself adds materially to their interest, and constitutes an additional reason for their publication. I am therefore induced to lay before the Society a coin in my possession, which is by no means unique, but of which by some chance there appears to be no specimen in the national collection, and which has long appeared to me to possess a peculiar interest. No similar specimen has I believe been figured, nor is the coin described by Mionnet.

¹ The same credit may be claimed for the well-known work on the Syrian coins in the cabinet of Mr. Matthew Duane, published after the collector's death, with an historical memoir by Dr. Gough, and a splendid series of plates by Bartolozzi, which has rendered this catalogue the ordinary work of reference in respect to this series of coins. At the same time it does not really pretend to be more than a catalogue of a private collection, and very little is done towards examining or rectifying the received attributions of the coins figured and described.

² See the "Num. Chron.," N.S., vol. xix. pp. 10, 11; xx. p. 189.

Obv.—Diademed head in advanced age, and with strongly-marked features, with a bull's horn above the ear, directed forwards.

Rev.—Apollo seated on the omphalos, to left, holding a bow in his right hand, and resting the left on the omphalos; leg. ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ; in front of the seated figure a monogram composed of ΔΙ, and in the exergue Ι. Size 7½. Weight 262 grs. Plate IV. Fig. 1.

I purchased this coin at the Ivanoff sale in 1863 (Lot 624), where it was ascribed to Antiochus I., but with an expression of doubt, and the compiler added, "the portrait remarkable and apparently horned." Of the existence of the horn there can be no doubt; and it is well known that this was adopted as a characteristic by the first Seleucus,³ and is found on several of his coins; but nothing similar to it is found on any of the coins of Antiochus I., or any of his successors.

The head itself will be found on a careful examination to present a wholly different character from that of Antiochus I., whose physiognomy is well known to us from the coins with the title of Soter, and a long series of others with precisely the same character of profile.⁴ No portrait among those of the early Seleucidan kings is more marked or better defined. A glance at the accompanying plate will show better than any description the strongly-

³ See a note on this subject by Colonel Leake in his "Numismata Hellenica," p. 21. Appian tells a story, repeated by other writers, of Seleucus having on one occasion subdued a savage bull, that had escaped while Alexander was about to sacrifice it; and adds, that "on this account horns were added to his statues" (Appian "Syriaca," 57). The story is doubtless a mere myth, but it is good evidence of the fact that his portraits usually bore the horns of a bull.

⁴ See British Museum Catalogue, Pl. III. Figs. 4—7.

marked features of difference in that now presented to my readers; it may suffice to point out that the countenance is far more vigorous and expressive than the grave and earnest face of Antiochus I., at the same time that it is that of a man advanced in years, perhaps older than any of the distinctly recognisable portraits of that monarch. But little importance can be attached to this point. It is the *horn* which points in my opinion clearly to the conclusion that the head in question is not that of Antiochus himself, but of his father Seleucus, to whom such an appendage would properly belong; and as the older monarch died at the age of at least seventy-three years, this would entirely suit with the character of the portrait.

It is true that such a head presents no resemblance to that which is found on certain rare but well-known coins of the first Seleucus, which bear a Victory crowning a trophy on the reverse, and on the obverse a youthful head wearing a closely-fitting helmet, ornamented with a horn.⁵ But I must venture to express my doubts, or rather my utter disbelief, that the head in question is that of Seleucus; and it is with great surprise that I find this conclusion taken for granted by almost all numismatists, from Eckhel to Mr. Percy Gardner. Colonel Leake alone (so far as I am aware) has judiciously hinted a doubt on the subject.⁶ Yet the difficulties in the way of this attribution would appear to be obvious. The helmeted head is

⁵ See the figure in the Catalogue of the Greek Coins in the British Museum ("Seleucidæ," pl. i. fig. 11). The coins of this type are, I believe, generally brought from Babylonia or other provinces east of the Euphrates, and, strange to say, are almost always *plated*. See note to the Catalogue of the Bompis Collection, No. 1,706. This is the case with my specimen also, which weighs only 244 grains.

⁶ See his "Numismata Hellenica," p. 22.

distinctly that of a young man, with very regular features, just such as an engraver would naturally assign to an ideal head, but presenting not the slightest trace of those strongly-marked features which are so characteristic of the earlier Seleucidan portraits. Now we possess three different statements with regard to the age of Seleucus I. Appian tells us that he was seventy-three at the time of his death (in B.C. 280),⁷ while Justin makes him seventy-seven,⁸ and Dexippus splits the difference and says he was seventy-five.⁹ But even according to the lowest computation he was not less than forty-seven years of age when he assumed the title of king (in B.C. 306),¹⁰ and it is utterly impossible to reconcile this fact with the portrait on the coins in question. Either therefore we must suppose the head to be that of some hero or divinity, and not that of Seleucus at all (which appears to me much the most probable), or we must admit it to be so wholly idealised as to be worthless for purposes of identification.

We find, however, on the *gold* coins of Seleucus (with the type of the horse's head on the reverse) a head which, though not so characteristic as that on my tetradrachm, is by no means incompatible with the supposition of their being intended for the same original, and this head is also horned, though the horn, evidently that of a bull, is

⁷ Appian, "Syriaca," c. 62.

⁸ Justin, "Hist." xvii. i.

⁹ See the fragment of his history quoted by Clinton ("F. H." vol. ii. p. 236). Eusebius follows Dexippus, and assigns to Seleucus the age of seventy-five years (Euseb. Chron. ed. Mai, i. 40).

¹⁰ Seleucus is considered as having reigned thirty-two years (B.C. 312—280), but he certainly did not assume the title of king till B.C. 306.

inclined backward, instead of forward, as on my coin.¹¹ In this respect the symbol on my coin agrees with those of Demetrius Poliorctes, the only others, I believe, out of the Syrian series which have this appendage. But little, if any, value can be attached to this distinction.

It must be observed that in addition to the different character of the head, the position of the seated figure of Apollo on the reverse differs from that upon *all* other known coins of Antiochus I. (to judge from the printed lists), on which Apollo is uniformly represented as holding up an arrow in his right hand, while his left rests upon his bow, immediately behind the cortina. The same attitude is found, with very few exceptions, throughout the whole Syrian series;¹² and though so small a difference may really have no significance, it is certainly worthy of notice when associated with so remarkable a difference in the portrait on the obverse.

If the head on the coin in question be really, as I believe it to be, that of Seleucus, although the reverse bears the name of Antiochus, the question next arises, whether it was placed by the son on his own coinage, as a tribute of respect to his father, in the same manner as Lysimachus adopted that of Alexander, the portrait being in both cases *deified*, by the addition of the horn of

¹¹ See the British Museum Catalogue, Pl. I. Fig. 6.

¹² The only other cases which I know of, where the seated figure holds the bow in the right hand, are a small group of coins sometimes ascribed to Antiochus Hierax, to which I shall again advert presently; and one or two of Antiochus II., a specimen of which is figured in the British Museum Catalogue, Pl. V. Fig. 3. But this last variety appears to be an unusual one, none of the coins in my collection, which can be attributed to the same monarch, presenting this peculiarity; and it appears that there is only one in the British Museum.

Ammon in the one case, and of the bull's horn in the other; or, as appears to me most probable, that it was struck during the joint reign of Antiochus with his father Seleucus. We learn from Appian that the aged monarch in the last years of his reign consigned to his son the government of all the provinces of Upper Asia, reserving to himself only those from the Euphrates to the Hellespont.¹³ And it appears certain that he bestowed upon him on this occasion the title of king. Mr. Percy Gardner has recently published, in the "Numismatic Chronicle," some coins of well-known types, but bearing the names both of Seleucus and Antiochus, which he regards as the only memorials of their joint reign. But at the same time he hesitates to admit that Antiochus assumed the title of king during the lifetime of his father. But besides the express statement of Appian to this effect,¹⁴ it is certainly in itself highly probable, and in accordance with a frequent practice among the successors of Alexander. At the same time he would remain virtually "his vice-regent or satrap," as he is called by Mr. Percy Gardner, and might very reasonably indicate this by placing on his coins the head of the elder monarch with a symbol by which it could be generally recognised.

The view I have suggested would receive a strong confirmation if it could be shown that my coin, like those published by Mr. Gardner with the joint names, came

¹³ Appian, "Syriaca," c. 62.

¹⁴ *Ibid.* c. 59, 61. It is true that where Appian uses the expression on the part of Seleucus, "καὶ πέμπω βασιλέας ἵνα τῶν ἐθνῶν ἥδη τῶν αὐτοῦ," the words may be merely rhetorical, but this does not apply to the former passage, where he simply states the fact that Seleucus in his own lifetime (περὶ τὸν χρόνον) appointed his son to reign over the upper provinces in his stead.

from the remote provinces in the East;¹⁵ but unfortunately, as is too generally the case with coins purchased at a sale, I have no knowledge where it was originally found. I have since seen two other specimens, one of which was sold in this country subsequently to my coin, and was, I believe (for I have unfortunately no note of the fact), that which constituted Lot 826 in the sale of the Whittall collection (1867), where it was ascribed, without doubt erroneously, to Antiochus Hierax; and still more strangely, described as bearing a horn of the Syrian goat (!). The third example I saw in 1871 in the hands of Mr. Alishan, an Armonian coin-dealer at Constantinople, who absurdly ascribed it to one of the kings of Pergamus, on account of the supposed resemblance of the head to those of the only monarch of that dynasty who did not retain the traditional portrait of Philetærus.¹⁶ What is become of either of them I cannot say; and have therefore no means of testing the accuracy of my memory with regard to the likeness of the portraits, but I have no doubt of the general resemblance of their character.

Having taken this occasion to present to the readers of the "Numismatic Chronicle" an unpublished coin that appears to me to be of some interest, I may perhaps be allowed to avail myself of the same opportunity to bring before them a brief notice of some other coins in my

¹⁵ It may be observed that it bears on the reverse a monogram composed of the letters ΔI , which, as observed by Mr. Gardner ("Num. Chron.," N.S., vol. xix. p. 12), are to be found on almost all the coins which can be traced to the "Oxus Find."

¹⁶ The coins to which I advert are those with a head such as that figured by Mionnet, pl. lxxv. fig. 5, and sometimes referred to Attalus I. The portrait on these coins certainly bears some resemblance to that on the coin at present under discussion, but the likeness is, without doubt, merely fortuitous.

collection belongiag to the same series, which are not found in the British Museum, and at the same time to offer a few remarks on the arrangement proposed by Mr. Garduer for the earlier coins of that series.

It is hardly necessary to say that the arraangement and correct attribution of the coias of the earlier Seleucidan kings has been long ackaowledged as one of the most perplexing problems that presents itself to the numismatist. The prudent and cautious Eckhel, while rejecting as merely conjectural, or based on very inadequate evidence, the attributions proposed by his predecessors, includiag Pellerin, was content with fixing a few definite points, admitting that, with these exceptions, it was impossible to assign the coins of the three first Seleuci and the three first Aatiochi to their respective monarchs on anythiag like assured grounds. It must be added, as he himself observes,¹⁷ that there is a fourth Aatiochus to be taken into account, as the brother of Seleucus II., kaown in history as Antiochus Hierax, reigned for a considerable time as an independent monarch in Asia Minor, and may therefore probably have struck coins in his own name, which would doubtless, like those of his contemporaries, bear only the simple inscription ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ. This last suggestion, which appears to have been first made by Pellerin,¹⁸ has been adopted by almost all subsequent numismatical writers, so far as to assign *some* medals of the series to Antiochua Hierax, though differing widely as to those which they selected for this attribution. Mr. Gardner has gone farther than any previous writer in

¹⁷ "Eckhel Doctrina Numorum Veterum," tom. iii. p. 215. He adds the general remark, "Incerta omnia et ambigua."

¹⁸ "Rois," p. 69.

the share that he assigns to this prince; but he has since seen cause to alter his views, and in his most recent paper on the subject admits that one extensive series of coins, which he had assigned in the British Museum Catalogue to Antiochus Hierax, must continue to be classed, as they had been by all previous numismatists, among those of Antiochus III.¹⁹

This change of view on the part of one who has bestowed so much attention upon this class of coins, is a sufficient proof how little we have yet arrived at any secure system of classification. It is indeed evident how insecure must be the basis of any arrangement, which is founded almost exclusively upon the character of the heads or the obverse of the coins, without any assistance from distinctive titles, such as were assumed by the later kings of the same dynasty, or from dates, which do not appear on the silver coins until a considerably later period. At the same time it is always useful to endeavour as far as possible to define the limits of our knowledge, and it is with this view only, and not in any spirit of controversy, that I shall proceed to indicate briefly the points upon which Mr. Gardner's conclusions appear to me to be based upon sufficient evidence, and those where I am compelled to differ from him, or can only regard his suggestions as mere conjectures.

There are, as it is scarcely necessary to point out, four

¹⁹ "Num. Chron.," Third Series, vol. i. p. 11. It is unfortunate that the Catalogue of the Bompois collection (sold at Paris in 1882), which contained the richest series of the Seleucidan coins that has been brought to sale since the Northwick collection (in 1859), was compiled by the owner in accordance with Mr. Gardner's first classification, so that there are no less than seven coins attributed to Hierax, while only the same number are assigned to Antiochus the Great.

kings of the name of Seleucus, and as many of the name of Antiochus (including Antiochus Hierax), among which we have to arrange as best we can the large number of coins that bear the simple title of **ΒΑΣΙΛΕΥΣ ΣΕΛΕΥΚΟΥ**, or **ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ**. Some few of the latter class unquestionably belong to Antiochus IV., and may be recognised without doubt from the resemblance of the portrait to those of the same monarch on coins which bear his titles at full. We thus obtain a distinct limit in this direction. At the beginning of the series, on the other hand, the coins of Seleucus I. may be considered as all established upon sufficient grounds, and are I believe universally recognised by numismatists.²⁰ Again, the coins of Antiochus I. are clearly characterized by the fortunate circumstance that a few of them bear the surname of Soter, which we know to have been assumed by that monarch in the latter part of his reign;²¹ and though the coins with this addition are very rare, the portrait is so marked a one as to enable us to assign without hesitation to that monarch a large series of silver tetradrachms bearing only the title of King Antiochus, but with many varied monograms. Unfortunately none of these are calculated to throw any light upon the place of mintage of the series in question; but the general similarity of the style and execution is such as to render it probable that they were produced in the same part of the empire.²²

²⁰ I here refer only to the silver coins. I have not attempted in this paper to enter into the still more difficult subject of the copper coinage of the Seleucidan kings.

²¹ Appian, "Syriaca," c. 65.

²² A large number of these coins with varied monograms appeared in the sale of Mr. Whittall's collection (1867), forming Lots 794 to 811. These, I believe, proceeded for the most part from a recent "find" in Asia Minor, where they were asso-

None of them, on the other hand, bear any additional symbol or adjunct, such as are found on the coins of Alexander the Great and Lysimachus, as well as in some instances on the coins of Seleucus I. with the types of Alexander.

We have thus at the commencement of the series a well-defined and considerable group or class of coins, presenting numerous varieties, which may be assigned with reasonable certainty to Antiochus I. This includes the varieties numbered 6 to 18 in the British Museum Catalogue, of which a characteristic figure is given in Plate III. Fig. 4. But the very next step involves us in difficulties. Mr. Gardner has figured in the same plate (Fig. 3) a coin with a head of a very different character, on the reverse of which Apollo holds *two* arrows instead of *one*, as on all the coins above described. Such a difference alone might be of little importance; but the whole style of the reverse is of a different character, and points to a different place of mintage or epoch. The reverse of the coin figured is identical with those of two specimens in my collection, in fact the three are as closely alike as it is possible for coins to be which do not proceed from the same die. But the heads on my two coins differ materially, the one resembling, though not identical with, that figured by Mr. Gardner, while the other, which is of very superior execution, much more resembles the portrait on the coins bearing the name of Soter, and the series above attributed to him. It is, however, of a somewhat younger character. Such is the difference between

ciated with coins of Antiochus II., which will be hereafter mentioned. Unfortunately, as is usually the case with sale catalogues, no record is preserved of the monograms which they bore.

the two portraits, that I had at first, in arranging my cabinet, assigned the one coin to Antiochus I. and the other to his son and successor Antiochus II. In fact the portrait on this coin will be found, on comparison with that figured by Mr. Gardner in Plate V. Fig. 3, and assigned by him (in my opinion correctly) to the second king of that name, to resemble it so strongly that it is difficult not to suppose them meant for the same person. The fact that the reverses are so precisely similar as to appear at first to be from the same die, undoubtedly renders it probable that both coins were struck under the same reign, but it is not conclusive, as we have many instances of the combination of the same die on the reverse with different obverses and *vice versa*.²³

But Mr. Gardner has, moreover, included among the coins of Antiochus I., one—and one only—of a series that has been almost uniformly assigned by numismatists to Antiochus II. This is the coin figured on his Plate III. Fig. 2, with a seated figure of Hercules on the reverse, instead of the customary Apollo.²⁴ It must be admitted that the reasons for attributing this particular group of coins to the second Antiochus, instead of his predecessor or successor, are extremely slight. That mentioned by Mr. Gardner, namely, the adoption of this type by Euthy-

²³ To enable my readers to judge of the different characters of the two heads, as well as of their relation to those figured by Mr. Gardner, I give figures of the obverses of both coins. The reverses being identical, I have figured only one (See Plate IV. Figs. 2, 3).

²⁴ My remarks on this coin were drawn up before I was aware that Mr. Howorth had come to the same conclusion (see his paper, entitled "Some Re-Attributions," in the last number of the "Numismatic Chronicle," p. 22). It gives me much satisfaction to find my view supported by his independent authority.

demus, King of Bactria, whose revolt from the domination of the Syrian kings may probably be placed under the reign of the second Antiochus, is undoubtedly entitled to some weight, though very far from conclusive.²⁵ The best argument that I know for assigning them to this king is, that we have no one else to give them to, or, at least, no one else has a better claim. But the series in question is so strongly separated from all the other coins of the earlier Seleucidans by the type of the reverse, as to render it almost certain that it was only a temporary and occasional deviation from the established custom: an inference confirmed by the fact of the rarity of these coins as compared with those of the ordinary type on the reverse. Hence it would appear obvious that nothing but very strong arguments could lead to the separation of any coins of this group from one another, and I must confess it is unaccountable to me that Mr. Gardner, while adopting the received conclusion respecting the coins of this type in general, should have separated one of them from the rest, and assign it to Antiochus I. on the sole ground of a fancied resemblance of the portrait to that monarch, a resemblance which I for one entirely fail to see, and which, at all events, is certainly not stronger than might easily be found between a father and son.

Unfortunately it has to be admitted that we have *no certain* coins of Antiochus II., and consequently no trustworthy evidence of his portrait, while those that are found on the different coins ascribed to him on plausible grounds vary to a great extent: notably those with the

²⁵ It is an argument against this connection, that the coins with this type, so far as we can judge, all appear to have been struck in Asia Minor, in the neighbourhood of the Hellespont and Propontis.

reverse of the seated Hercules, of which the two in my collection present widely dissimilar portraits, while one in the Whittall sale, precisely similar to one of mine in other respects, had a much younger head on the obverse.²⁶

Another group of coins that Mr. Gardner, in common with most recent numismatists, has assigned to Antiochus II. is that of which the obverse presents a winged head, having the wing attached to the diadem, in the same manner as is seen on the coins of Prusias II., King of Bithynia. This attribution has been generally received since the time of Mionnet, nor is there anything that I know of to be said against it;²⁷ but it is difficult to say on what positive evidence it rests. The coins in question, which, like those last described, are of considerable rarity, form a very marked group, and were probably all struck in the same place, all those to which I am able to refer having the same accessory symbol of a horse feeding, the well-known type of Alexandria Troas. The portraits on the obverse also, which are of far superior character to any others that can be ascribed to this monarch, are almost identical. The head undoubtedly presents some resemblance to that of Antiochus I., such

²⁶ The discrepancy between the portraits on my two coins will be best seen by a reference to the figures given in Plate IV., Figs. 4, 5.

The reverse of the first of these appears to be the same with the coin figured (though not very accurately) by Pellerin ("Rois," pl. viii.): that of the other has a moneta in the field, with two monograms beneath: it is only slightly varied from those in the British Museum.

²⁷ Eckhel, indeed, inclines to follow Vaillant and Pellerin in ascribing the coins with this addition to Antiochus I. Frölich was, I believe, the first to assign them to Antiochus II.: a view which was adopted by Mionnet, without any explanation of his reasons for the attribution.

as might well be traced between father and son, especially in the deep-set eye and projecting brow, but it has much the appearance of being idealised, like the head of Alexander on the coins of Lysimachus, and allowance must be made for this in comparing it with other coins of inferior execution.

By the side of this small, but definitely characterized, group of coins we find a considerable number of others, of which the portrait, though without the wing on the diadem, bears so strong a resemblance to those which have this peculiarity, as to leave no reasonable doubt of the head being intended for that of the same monarch. Such is the coin figured in the British Museum Catalogue (Plate V. Fig. 1), which, singularly enough, appears to be the only specimen of this class in the collection, though they are not very uncommon, and there are several varieties of them. But it is worthy of notice that all these coins (so far as my experience goes) appear to belong to the same part of Asia Minor as do those with the winged head, from their bearing in the field of the reverse either the long torch, characteristic of Cyzicus, or the forepart of a sea-horse, appertaining to Lampsacus, or, as in the specimen above referred to, both together.

But while a considerable number of coins may thus be referred, with a reasonable degree of certainty, to Antiochus II. on the ground of the resemblance of the portrait alone, there are others which, though it is difficult to assign them to any other monarch of the series, present a portrait which bears but a very imperfect similarity to the same type. Such is the one which I have figured in Plate IV. Fig. 6, and which is distinguished from all other varieties in my collection by the adjunct on the reverse of an owl in the field close to the knee of the sit-

ting figure. There is no similar coin in the British Museum;²⁸ and in referring it to the second Antiochus I must confess that I do so solely because the head appears to be certainly not that of either the first or third monarch of the name.

The coins of Seleucus II. present no great difficulty. They are readily distinguished by the figure of Apollo being always in a standing position, instead of being seated on the omphalos, as on all the other early coins of the series. And the circumstance, pointed out by Mr. Gardner, that a similar standing figure is found on coins which have a head on the obverse of a somewhat older character, and with a long beard,²⁹ renders it probable that they all belong to the same king. No reasonable doubt can be entertained that the bearded portrait is that of Seleucus II., who, as we know from Polybius,³⁰ bore the surname of Pogos (the bearded), and hence we may fairly

²⁸ The only tetradrachm of the Selencidan series in the national collection with an owl as an adjunct is one of quite a different character described by Mr. Gardner in the Appendix to his Catalogue (p. 111), and ascribed by him, without doubt correctly, to Antiochus Epiphanes. But an owl is found in the field of coins of Alexander and Lysimachus, which are, however, of uncertain attribution.

²⁹ As these coins are of extreme rarity—the one in the British Museum being at one time thought to be unique—I may point out that a specimen seems to have passed unnoticed in the Gréan sale (Paris, 1867, No. 2264), where it was erroneously ascribed to Seleucus III.

³⁰ Polybius, ii. 71. The testimony of Polybius on this point is conclusive. But the supposition of most recent numismatists (including Mr. Gardner) that his adoption of the beard was connected (as in the similar case of Demetrius II.) with his captivity in Parthia, appears to rest on no foundation.

Niebuhr has shown ("Kleine Schriften," p. 300) that the passage on which Eckhel and Clinton have relied as proving that he was detained in captivity by the Parthians after his defeat by

conclude that the coins with the youthful head and the same reverse belong also to the same monarch, whose reign lasted for a period of twenty years.

It is remarkable that two of the coins of this type in my collection have the peculiarity (which is not found on any of those in the British Museum) of having detached letters, instead of monograms, in the field. One of them has, between the legs of the standing figure and the legend, the two letters $\Lambda\Sigma$, and beneath them $\text{N}\Gamma$: the other has the letters NA in the field to the left, beyond the legend. It is obviously tempting to regard the letters NA and $\text{N}\Gamma$ as indicating *dates*; the more so as in the latter case it is difficult to see how they could have formed the commencement of a *name*; but there is no other instance of dates occurring on any of the coins of the Seleucidae series, until a considerably later period,³¹ and the numbers unfortunately do not suit with those of the Seleucidan era, the only one to which they can reasonably be supposed to refer. The reign of Seleucus II. lasted from B.C. 246 to B.C. 226, corresponding to the years of the Seleucidan era 66 to 86; hence the dates 51 and 67, computed from the same era, would fall within the reign of his father Antiochus II. I am at a loss to propose any solution of this difficulty. It may be added that the two coins in question do not present any marked similarity of

them in B.C. 237, refers, in fact, to another Seleucus (the son of Antiochus Sidetes), and the idea that Callinicus was taken prisoner is justly rejected by Professor Rawlinson. ("Sixth Oriental Monarchy," p. 49.)

³¹ Dates are found on small copper coins, struck in Phœnicia, in the reign of Antiochus III.—the earliest being of the year 112 (B.C. 200); but they do not make their appearance on the tetradrachms until the reign of Demetrius I. in the year 158 (B.C. 164).

style, such as would indicate their proceeding from the same place of mintage, but, on the contrary, exhibit considerable differences of execution, though the general character of the portrait, as well as the type of the reverse, would at once lead us to assign them both to the same monarch.³²

We come now to what has presented one of the chief stumbling-blocks to all numismatists who have attempted to arrange this difficult series—that of the coins to be ascribed to Antiochus Hierax. From the time of Pellerin to the present day it has been generally admitted that as Antiochus, the younger brother of Seleucus, was unquestionably master of a great part of the kingdom of Syria, especially Asia Minor, during a considerable portion of his brother's reign, and repeatedly asserted his claim to the whole, it is almost certain that he must have struck coins in his own name, and with his own portrait. But as these would undoubtedly bear—as was the case with all the other coins of the dynasty for a period of more than a century—no other inscription than that of **ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ**, it becomes very difficult, not to say impossible, to distinguish them at the present day from the numerous and very various coins which are generally ascribed to Antiochus III.

Pellerin was the first to publish a tetradrachm which he ascribed to Antiochus Hierax, solely on the ground of the resemblance of the head to that of his brother Seleucus Callinicus;³³ and a similar coin was published by

³² See Plate IV. Figs. 7, 8. Letters are found in like manner in the field of the gold coin of Seleucus II., which is figured in the Duane collection (pl. iii. fig. 21), but in that case also they cannot represent dates.

³³ Pellerin, "Rois," p. 69.

Duane, as well as another slightly varied from it. The cautious Eckhel refused to admit the validity of Pollerin's attribution,²⁴ but Mionnet introduced into the first edition of his work a long list of coins which he assigns to Antiochus Hierax, but which are in all probability of Antiochus III., while in the Supplement he accepts the view taken by Visconti, who ascribes to Hierax the coins with the wing attached to the diadem, which are now generally ascribed to Antiochus II., though, as I have already mentioned, on no very secure ground. Mr. Gardner has, in his Catalogue, taken up a wholly new line, and while assigning the coins with the winged head to the second Antiochus, has transferred to his son Antiochus Hierax a whole group of coins with a well-marked type of countenance which had been hitherto ascribed to Antiochus III., a classification to which Mr. Gardner himself has been fain to return, from subsequent experience, having found that the coins in question generally came from the far eastern provinces of the Seleucidan empire, which certainly were never subject to Antiochus Hierax.

We find ourselves thus thrown back into the same state of uncertainty as before with regard to the coins struck by that prince. It is with the greatest diffidence that I venture to suggest the attribution to him of a coin in my collection, which appears to me to have at least a somewhat better claim to fill this gap in the series than any other with which I am acquainted. The portrait, which is that of a young man, has no resemblance, in any of the more characteristic features, to that of Antiochus III.,

²⁴ "Causa illa una, quod vultus, qui est in hoc nummo, vultum fratris Seleuci II. roferat. Quam sententiam tenent, cui justa ea videbitur." ("Doct. Num. Vet." tom. iii. p. 219.)



while it certainly presents a striking likeness to that of Sélcucus II. Vague as any such inference must be where it is a question of family likeness between brothers, not of identifying different portraits of the same individual, it is unfortunately all we have to rely upon; but I think I may fairly assert that the likeness is much stronger in this case than in any other that has yet been published. On this point, however (thanks to the autotype process), all my readers may judge for themselves by comparing the figure in Plate IV. Fig. 9, with that in Mr. Gardner's Catalogue (Plate VI. Fig. 1)—a more characteristic portrait than that on the coins of Seleucus Callinicus figured by myself. It is worthy of note that the reverse of the coin in question represents Apollo holding a bow, instead of an arrow, as usual, but this peculiarity, as I have already observed, though quite *exceptional*, is found in other instances also; among others, on three coins in the British Museum, which were ascribed by Mr. Gardner to Antiochus Hierax.

The coins of Seleucus III., on the other hand, present little difficulty. His reign was a short one, and, as might be expected, his coins exhibit but little variety. They have, indeed, been frequently confounded with those of Seleucus IV.,³⁵ but, as is pointed out by Mr. Gardner, the portrait of the latter monarch is identified by copper coins bearing the dates of 135 and 136 of the Seleucidan era (n.c. 177–176);³⁶ and, as there is no resemblance between the two heads, there can be no doubt that we may safely ascribe those with the younger head to

³⁵ This is the case in the Duane Catalogue (pl. iv.), where the only two silver coins figured and described as belonging to Seleucus III. unquestionably belong in reality to Seleucus IV.

³⁶ Catalogue, p. 19.

Selucus III. It has been justly observed by Mr. Gardner, as it had been by Pellerin before him,³⁷ that the portrait on these coins entirely agrees with the character given of Seleucus III. by historians, that he was a person of infirm health and character.

It may perhaps be worth while to note that by far the greater part of the coins of Seleucus III. are of very similar fabric, and have the same two monograms on the reverse— Σ in the field to the left, and Ψ to the right. Both these monograms are, indeed, of common occurrence on the coins of some of the earlier Seleucidan kings, from Seleucus II. to Antiochus III., but are not found, I think, at either an earlier or later date. They are both of them peculiar; and, without attempting to explain them, it appears to me that they clearly indicate a particular mintage; whether local or with reference to the presiding magistrate it is impossible for us to say. All such cases of the frequent recurrence of monograms may, if carefully observed, tend to assist in the classification of this difficult series of coins.

We come now to the coinage that is at once the most important and the most difficult in the whole Seleucidan series. "The coins of Antiochus the Great" (as Mr. Gardner observes) "are very numerous, and present us with great variety, as might have been expected from the length of his reign and the extent of his dominions." Not only did he re-establish the Syrian monarchy in a position of importance that it had not attained since the reign of Seleucus I., but he personally made expeditions into the remoter provinces of the empire, which were followed by their temporary submission;³⁸ and it is highly probable

³⁷ "Rois," p. 70.

³⁸ Polyb. x. 27, 49; Appian, "Syriaca," c. 1.

that on this occasion coins would be struck with his "image and superscription" in these more distant regions, as well as in the established mints in Babylonia, Syria, and Asia Minor. At the same time it might be expected that such coinages would be carried on in a somewhat imperfect manner, and would not only be of inferior execution as works of art, but would probably present considerable diversities of portrait. And this is just what we find to be the case in fact. All collections of Seleucidan coins present a considerable number of specimens that are generally classed as belonging to Antiochus the Great, though without any special grounds of identification; and these are often of a rude and semi-barbarous style of execution. Unfortunately they very seldom afford us any clue to the place of their origin by distinguishing mint-marks as symbols of the cities where they were struck, and the monograms they bear are for the most part without signification to us.

All that we can do is to class them into certain groups, which present sufficient resemblance to render it probable that the coins included in them belong to the same place of mintage, or, at least, the same region of the extensive dominions of Antiochus the Great, and may be assigned also to the same period of his long reign. To accomplish this it appears to me that there are two points of departure.

The first of these, which has been recognised and adopted by all numismatists from the time of Pellorin and Eckhel, is furnished by certain small copper coins, struck by some city of Phœnicia, bearing dates of the Seleucidan era which fall within the reign of Antiochus the Great, while the obverse presents a head that appears to be clearly identical with that found on certain tetradrachms assigned to that monarch. The dates thus furnished are

PIB, **PIE**, **PIZ**, and **PKΔ**, or 112, 115, 117, and 124 of the Seleucidan era,³⁹ corresponding with B.C. 200, 197, 195, and 188, and coinciding with the latter portion of the reign of Antiochus. Unfortunately these coins are very rare; there is only one in the British Museum, which, as is generally the case with them, is in imperfect preservation. Still it is clearly possible to identify the portrait on the obverse,⁴⁰ which may therefore be taken to represent what Mr. Gardner calls "the standard portrait of Antiochus III." This is found on the tetradrachm represented in Plate VIII. Fig. 7 of the Catalogue, which appears singularly enough to be the only specimen in the British Museum of the class or group to which it belongs, though there are several varieties of these coins, all presenting almost precisely the same character of head, as well as the same style of work, and all having the peculiarity which distinguishes them from the ordinary coins ascribed to Antiochus III., of having no monogram on the reverse, but a symbol or accessory type in the field, in front of the seated figure of Apollo, in the same manner as is found on so many of the coins of Alexander the Great and Lysimachus. The coin in the British Museum

³⁹ Frölich was the first to publish one of these interesting coins with the date of **PIB**: Vaillant added another with **PIZ**, and Pellerin a third with **PIE**. Mionnet gives the two last dates from coins in the Paris collection. That of **PKΔ** in the British Museum (Catalogue No. 33) was previously unpublished. There was one in the Northwick collection (Lot 1891) with **PIO**.

⁴⁰ This may be done with clearness on the coin itself in the Museum, though it is utterly impossible to do so from the figure in the catalogue. The antotype process, admirable as it is for large and well-preserved coins, is worse than useless for rubbed copper coins, such as the one in question; on which the eye of the practised numismatist may nevertheless read the date and discern the lineaments of the portrait.

has in the field a bow in its case. Three others, in my collection, have respectively a tripod, a cornucopiæ, and an anchor.⁴¹

We have here, therefore, a well-marked and characteristic group of coins, of the attribution of which there can be no doubt, but which are separated by marked peculiarities from the great mass of those that may probably be referred to the same monarch. But by the side of these we find a large number of coins, including those with the exceptional type of an elephant on the reverse,⁴² of which Mr. Gardner himself observes: "The portrait on them is, I think, always of the same king, though there is much variety."⁴³ And he proceeds to admit that the same portrait is found also on many other pieces, "which were doubtless also issued by Antiochus III.," some of which "bear a head almost as closely resembling that of Hierax as that of Antiochus the Great; in fact, between the two." This conclusion is the same at which I had arrived by a long study of this particular class of coins, as well as from the specimens in my own collection. If we start from the definite group above described it appears to me that we pass through a series of other examples, each departing somewhat wider from the first type, but not distinguishable from the one that comes next to it in the suite, till we arrive at the definite character of portrait which was selected by Mr. Gardner to be attri-

⁴¹ I have thought it worth while to figure one of these, with a tripod in the field, as an additional example for comparison of this peculiar type of portrait. (See Pl. V. Fig. 5.)

⁴² Of these the tetradrachms are very rare: the drachms on the contrary are common, but the portrait is generally not so clearly marked. It would be interesting to know whether this class of coins comes principally from the "far east."

⁴³ Introduction, p. 17.

buted to Antiochus Hierax. It cannot be disputed that the coins forming this last group, if they stood alone, would appear to belong to a different monarch from those first described, while they have a very strong resemblance among themselves.⁴⁴ But it has always appeared to me that it was impossible to draw a line between them, and for that reason I found myself unable to accept Mr. Gardner's separation of this particular group from the general mass of the coinage of Antiochus the Great. He has himself been induced to withdraw this proposed attribution, though for reasons different from those which were conclusive to my mind.

I was, moreover, led to the same result by setting out from a different point of departure, which appears to have been overlooked by Mr. Gardner, though it certainly contributes to throw some light upon the multifarious coinage in question. Singularly enough, it appears that there is no specimen in the British Museum of the coins of Antiochus III. with the young head of that monarch. I do not here refer to those of an infantine character, which are attributed to him by the earlier numismatists, including Mionnet (Suppl. tom. viii.), but have been justly eliminated by Mr. Gardner, who ascribes them to the

⁴⁴ They appear, moreover, to form a *limited* group; as those in my cabinet which I should select as typical examples of this character of portrait correspond exactly in the monograms with Nos. 9, 10, and 11 (of Antiochus Hierax) in the Catalogue, p. 20. Another, with a head almost precisely similar, is identical with that figured in the Catalogue (Pl. VII. Fig. 8), with the long torch of Cyzicus (?) in the field, and an eagle standing in the exergue.

The coins which I have figured in Plate V. Figs. 6, 7, appear to me to illustrate the transition from what may be called the Phœnician type of portrait to that characteristic of this (so-called Hierax) group.

child Antiochus, the son of Seleucus III., who appears to have borne for a short time the title of king. This suggestion, which was first made by Droysen ("Hellenismus," vol. ii. p. 521, note), is in my opinion much the most plausible that has been proposed for these juvenile coins; but to whatever prince they are to be attributed, it is certain they do not belong to Antiochus III., who was nearly twenty years old at the time of his accession.⁴⁵ There are, however, other coins with a young head, not that of a child, but of quite a young man, with a small whisker, and a sharp, somewhat prominent nose, which might easily develop itself with advancing years into the more conspicuous proportions assumed by that feature on the later coins of Antiochus. One of these coins is figured by Duane (Plate IV. p. 36, Fig. 15), and is evidently identical with one in my cabinet, which has the same mint-mark in the field. This is one of those already noticed as so common on the coins of Seleucus III., which in style of execution this coin also greatly resembles. The small whisker also is common to both, though afterwards laid aside by Antiochus III.; and altogether there can, I think, be no reasonable doubt that these were the first coins issued by that monarch, and that they were struck at the same mint with those of his father Seleucus.⁴⁶

⁴⁵ His age is fixed by the statement of Polybius, quoted by Clinton (ad ann. 192), that he was fifty years old at the time of his marriage at Chalcedon in that year.

⁴⁶ It may be observed in passing that, although we are for the most part unable to determine the meaning of the monograms on the Seleucid coins, it is almost certain that they indicate either the place of minting, or the monetary magistrate under whose authority they were issued. In either case their recurrence is worthy of notice as showing a close connection between the two sets of coins on which they are found; especially

Another coin in my collection has almost precisely the same head, though bearing different mint-marks, having three complicated monograms in the field, though, unfortunately, too much blurred in the striking to be clearly made out. A third coin, with a considerably older head, and a much fuller face—approximating already to the “standard portrait” of this king, but still retaining the whisker—is connected with the same group by the presence on the reverse of *both* the monograms (Σ and ϙ) of the coinage of Seleucus III., which are not found united, I think, on any of the later coins of Antiochus.⁴⁷

But here again we find exactly the same case as in that of the former series. If we take the three coins last described as undoubtedly belonging to Antiochus III., we have others which have lost the distinguishing character of the whisker, but in other respects closely resemble the coin last described, and pass, by a series of imperceptible gradations, from the portrait there displayed to the type attributable to Antiochus Hierax. (See Plate V. Fig. 4.) The heads found on this latter group are those of a man in the prime of life, while those which belong to the group connected with Phœnicia are of a man more advanced in years, and may probably belong, like the dated copper coins, to the latter half of his long reign. There are, however, other differences in the portraits which cannot be thus accounted for, and can only be ascribed to an original difference in the type of countenance adopted at different mints,

where, as in the present instance, they are of a complicated or peculiar character. Of course the presumption is greatly increased where two monograms are *both* identical.

⁴⁷ They are, however, found separately. (See Catalogue, Nos. 5, 12, 16, and 25). The three coins above described are figured in Plate V. Figs. 1—3.



COINS OF THE SELEUCIDAE.



which were probably situated in different, and perhaps remote, regions of his extensive empire. Unfortunately there is, as already observed, almost no clue to their geographical distribution; and the evidence of the parts of Asia where they are found is at present very imperfect, and even if more complete, would afford, at best, a very unsafe criterion. Thus Mr. Gardner, in his most recent paper on the subject, considers the supposed coins of Antiochus Hierax to be of Oriental, and probably Bactrian, fabric.⁴⁸ But the only tetradrachm of this style which has an accessory symbol that may fairly be presumed to be a *local* mint-mark, has the long torch, which is generally regarded as characteristic of Cyzicus, and is found on coins of Alexander the Great, of Lysimachus, and of Antiochus II., all of which are attributed by competent authorities to that city.⁴⁹

There remains to be considered one other class of coins generally, and in all probability correctly, attributed to Antiochus III. These are the coins of semi-barbarous fabric, bearing on the obverse portraits of very diversified character, but all agreeing in the peculiarity of the sharp, long nose, so conspicuous on his more typical coinage.⁵⁰ These are commonly designated as of "Bactrian" fabric; an idea in some degree confirmed by the occurrence on three specimens out of four in my cabinet, all differing materially in the character of the obverse, of the two letters ΔΙ, which, according to Mr. Gardner, are found, either detached or in monogram, on a large part of the

⁴⁸ "Num. Chron." Third Series, vol. i. p. 11.

⁴⁹ See Müller's "Numismatique d'Alexandre," p. 238, and his "Münzen des Lysimachus," p. 74.

⁵⁰ As Mr. Gardner has not figured any coins of this class, I have thought it as well to present my readers with two charac-

coins derived from the so-called "Oxus Find."⁵¹ But it is difficult to believe that portraits so extremely dissimilar should have been struck as the effigy of the reigning monarch at the same mint or under the same mint-master. It is, perhaps, more probable that they continued to be struck after the death of Antiochus in the provinces which he had for a brief period reunited to the Syrian Empire, after his expedition into Bactria and the adjacent regions (B.C. 212—205). Concerning the circumstances of these provinces after this last assertion of the Macedonian power we know nothing; and our information as to the rise and extension of the Bactrian monarchy is so fragmentary and imperfect as to furnish us little assistance.

The coins of Seleucus IV., as has been already observed, may be identified with certainty by means of certain copper coins of Phœnician fabric, which bear the head of the king on the obverse and a galley on the reverse, with the dates 135 and 136 of the Seleucidan era. These appear to be very rare; there are none in the British Museum, nor apparently in the French Cabinet, as Mionnet cites the example to which he refers from Haym's "*Tesoro Britannico*," an old work on the accuracy of which no great reliance can be placed. It may, therefore, be interesting to figure a specimen in my collection, on which the portrait is very fairly preserved, though the data on the reverse is not distinctly legible. The two first letters (PA) are, however, clearly to be made out, and

teristic specimens of them, which, as will be seen, differ from one another as widely as they depart from the more normal types of Antiochus the Great. (See Pl. V. Figs. 8, 9.) The portrait on No. 8 is very similar to that figured in the *Gréan Catalogue* (No. 2296), where it is ascribed by M. Cohen, in my opinion erroneously, to Antiochus I.

⁵¹ See above, note 15.

the third is probably a **Z**, but in any case the date clearly belongs to the reign of Seleucus IV. and not to that of the more youthful monarch of the name. (See Pl. VI. Fig. 2.)

I have included in the same plate an unpublished tetradrachm of Seleucus IV. with a club in the field to the left, and above it the letters **ΣΑ**, and the monogram **W** in the field to the right.⁵² Mr. Gardner has described a tetradrachm of Antiochus IV. with an owl in the field and the same letters **ΣΑ**, on account of which he assigns the coin to Salamis in Cyprus;⁵³ but I confess the attribution appears to me very doubtful. There is, I believe, no other instance of a coin of any Syrian king struck in Cyprus, which remained, so far as we know historically, almost continually subject to the Ptolemies of Egypt.⁵⁴ At all events a coin with the same letters and a different symbol is worthy of record.

With the reign of Antiochus IV. (Epiphanes) we may be said to emerge into the broad daylight of historical certainty. The greater part of his coins bear his titles at full; and though those struck in the earlier part of his reign have only the simple titles of **ΒΑΣΙΛΕΥΣ ΑΝΤΙΟΧΟΥ**, the portrait which they bear is so characteristic as to leave no doubt that it is only the same head, at a somewhat younger age, which is found on the later coins with the high-sounding titles of **ΕΠΙΦΑΝΟΥΣ** and **ΝΙΚΗΦΟΡΟΥ**. His silver coins, however, though numerous and of fine execution, present little interest. They have no dates, and though frequently marked by the

⁵² Plate VI. Fig. 3.

⁵³ Catalogue, p. 111.

⁵⁴ It was, indeed, for a short time annexed to the Syrian monarchy by Antiochus IV., but was certainly never subject to Seleucus IV.

recurrence of the same monograms, these do not afford us any assistance in determining the cities at which they were minted.⁵⁵ But his copper coinage, as is well known, presents an anomaly wholly without example in the Seleucidan series, though easily explained on historical grounds. This is the occurrence of a whole series of coins, similar both in type and module to the coinage of the contemporary kings of Egypt, and wholly unlike that of any other Syrian monarch, but bearing his name and titles at full, so as to leave no possible doubt of their attribution. All numismatists are agreed in explaining this abrupt departure from the ordinary course of the Syrian coinage by the fact that Antiochus Epiphanes was for a considerable period master of Egypt, in which country the coins in question were undoubtedly struck. But while the greater part of the series are well known and not uncommon, it appears to have escaped the notice of numismatists that, besides the large coins with the head of Zeus, and the standing eagle on the reverse, figured by Duane (Pl. VIII.) and by Mr. Gardner in his catalogue (Pl. XII.), Antiochus caused to be struck copper coins corresponding to those of the *largest* size in the Ptolemaic series (size 13 of Mionnet's scale), and double the weight of those last referred to. One of these in my cabinet, which I procured at the Northwick sale, weighs about 1,180 grains. It has precisely the same reverse as the coins of this last class, but the head on the obverse, which is unfortunately a good deal rubbed, departs considerably in style and character from the head of Zeus on the coins of the

⁵⁵ It may be observed that the monogram Δ , which is of common occurrence on the coins of the Seleucidan series, is especially frequent on those of Antiochus IV.

inferior size, and still more widely from that on the corresponding coins of the Ptolemaic kings.⁵⁶ It is, so far as I am aware, an unique numismatic monument, and for convenience of reference I subjoin a detailed description, though the type presents no marked differences from that of the well-known coins figured by Duane and Mr. Gardner:—

Obv.—Head of Zeus, laureated, to the right, with slightly peaked beard.

Rev.—Eagle standing on a thunderbolt, to the right; legend ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ ΘΕΟΥ ΕΠΙΦΑΝΟΥΣ arranged in four lines, two in front, and two behind the eagle. Æ. Size 18. Pl. VI. Fig. 1.

The remaining coins belonging to the Seleucid series that I propose to take this opportunity of submitting to the Society, require little of comment or illustration. My object in bringing them forward is to present the readers of the "Numismatic Chronicle" with a kind of Supplement to Mr. Gardner's valuable Catalogue of those in the British Museum, by describing, and, where necessary, figuring all the varieties of any interest in my cabinet which are not in the national collection. At the same time I have not thought it worth while to notice mere varieties of monograms or other trifling details.

ANTIOCHUS IV., EPIPHANES.

Obv.—Head of Antiochus, to the right, diadomed.

Rev.—Zeus seated on a throne, to left, holding a sceptre in his left hand, and a Victory on his right; leg. ΒΑΣΙΛΕΩΣ ΑΝΤΙΟΧΟΥ[ΕΠΙΦΑΝ. . . . Size 8.

⁵⁶ It is, moreover, still further distinguished from these, its prototypes, by the absence of the horn, which at once characterizes the head on the Egyptian coins as that of Zeus Ammon.

This tetradrachm differs from all those in the British Museum, as well as from those in the Duane collection, by the omission of the word **ΘΕΟΥ** before **ΕΠΙΦΑΝΟΥΣ**, of which it appears to be the natural accompaniment. It is indeed wanting on some drachms of the same monarch, published by Mr. Gardner, but here the omission may probably arise merely from want of space. On the coin before us the exergue is wanting, but the word **ΘΕΟΥ** could hardly have been introduced there, though the additional epithet of **ΝΙΚΗΦΟΡΟΥ** might possibly have been so. The head on the obverse is, however, of a younger type than that found on the coins which have the additional title.

ALEXANDER I., BALA.

1. *Obv.*—Head of Alexander, to right, diademed.

Rev.—Zeus seated on a throne, to left, holding a sceptre in his left hand, and a Victory on his right; leg. **ΒΑΣΙΛΕΥΣ ΑΛΕΞΑΝΔΡΟΥ ΘΕΟΠΑΤ-
ΟΡΟΣ ΕΥΕΡΓΕΤΟΥ**; and in exergue **ΠΡΟ**. *℞*. Size 8. Wt. 261 grs.

It is the three letters on the exergue that characterize this coin as an unpublished variety. All the tetradrachms hitherto published with the type of the sitting Zeus have either a simple monogram in the exergue, or a date, which the letters **ΠΡΟ** cannot signify. Unfortunately we have no clue to their meaning.

2. *Obv.*—Same head.

Rev.—An eagle standing, to the left; leg. Around **ΒΑΣΙΛ-
ΕΥΣ ΑΛΕΞΑΝΔΡΟΥ**; in the field, to right, an ornamented trident; to left, the date **ΣΕΡ**, and beneath it the monogram **Φ**. *℞*. Size 7. Wt. 218 grs.

This coin belongs to the small but strongly-marked series of tetradrachms with Phœnician types, which are supposed to have been struck at Berytus, and are characterized by the trident in the field, as well as by the peculiar monogram (of which no explanation has yet been suggested) beneath the date.⁵⁷ This group is confined, I believe, to the two reigns of Alexander Bala and his successor Demetrius II. There is only one variety of it in the British Museum of the former monarch, with the date ΓΞΡ (163), which is found also on the coin figured by Pellerin.⁵⁸ The date of 166 is I believe unpublished; those of 167 and 168 are found on coins of the same series, with the name of Demetrius II. The attribution to Berytus is very uncertain, and rests, I believe, upon a mere conjecture of Pellerin's, who was the first to publish a coin of this particular series.⁵⁹

3. *Obv.*—Same head.

Rev.—Eagle standing to left, with palm-branch over its shoulder; in field to right an aplustre and ΣΙΔΩ, to left the date ΓΞΡ.

4. *Obv.*—Same head.

Rev.—Same type and legend; but with date CΞΡ.

Neither of these dates is to be found on the coins struck at Sidon in the British Museum. The latter date (166) occurs, however, on a coin in the catalogue of the Bompais collection (No. 1761).

⁵⁷ This monogram is, however, found on other coins which certainly do not belong to this same series. See Catalogue, p. 53, Nos. 24—26.

⁵⁸ "Rois," Pl. IX., p. 82. This is, doubtless, the same coin as that described by Mionnet, tom. v. p. 53, No. 486, though he rejects Pellerin's proposed attribution, and ascribes it to Sidon.

⁵⁹ Mr. Poole considers this attribution to be confirmed by certain coins of the Ptolemaic series; but the evidence appears to me far from conclusive.

5. *Obv.*—Same head.

Rev.—Same type and legend: but with the cluh and monogram of Tyre in front of the eagle; and in field to left the date **EΞP**, and the monogram **Ξ3**. *Æ*. Size 7. Wt. 218 grs.

It is singular that, though the coins of this reign struck at Tyre are in general of common occurrence, those with the date of 165 are an exception. There are none with this date in the British Museum, and though Mionnet gives one in his Supplement, he had never seen one, and cites it from the Museo San Clementi.⁶⁰ This specimen had a different mint-mark from mine.

ANTIOCHUS VII.

Obv.—Head of Antiochus, diademed.

Rev.—Eagle standing, with cluh and monogram of Tyre, and the date **ΠΡ** below, the monogram **ΛV**.

This date is wanting in the British Museum, but is figured by Duane and described by Mionnet, in both cases with a different monogram from mine. That on my coin is of rare occurrence on the Seleucidan series.

DEMETRIUS II. (Second Reign.)

1. *Obv.*—Head of Demetrius, diademed, with short beard and monstacho.

Rev.—Zeus seated on a throne, holding sceptre in left, and Victory on right hand; leg. **ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ ΘΕΟΥ ΝΙΚΑΤΟΡΟΣ**, beneath the arm **ΔΝ**, and in the exergue the letters **ΓΠΡ**. *Æ*. Plate VI. Fig. 4.

This coin is altogether different from any previously

⁶⁰ "Supplement," tom. viii. p. 42.

published of the same monarch. It is hardly necessary to remind my readers that the portraits on the coins of Demetrius II. (setting aside those struck in Phœnicia, on which the head seems to be purely conventional) are divided into two classes: those struck before his captivity, which have a quite youthful, beardless head, and those coined after his return from his long captivity in Parthia, which bear a head of more mature age with a long beard. The latter class also have uniformly the seated figure of Zeus Nicephorus on the reverse, while those of his earlier reign have generally the seated figure of Apollo, or that of Tyche, as on the coins of Demetrius I. The present coin has the same type on the reverse, but the head on the obverse, though of mature age, in accordance with the date which assigns it beyond a doubt to the second period of the king's reign, has a very slight beard, scarcely perceptible indeed, were it not for the strongly-marked moustache on the upper lip, which appears to pass downwards into something like a beard. The date on the exergue adds much to the interest of this coin, as it is the earliest that appears on any of the series with the seated Zeus type. It was indeed well known before, from Phœnician coins with the date of ΓΠΡ, that Demetrius was already returned from Parthia and in possession of at least a part of his dominions as early as the year 183 of the Seleucidan era (B.C. 129), but none of the coins that have been published with the bearded head bore an older date than 184. It is clear that this (183) was the first year of his renewed reign, as there are extant Phœnician coins (struck at Tyre) of his predecessor Antiochus Sidetes, with the date ΓΠΡ. Demetrius was generally and naturally supposed to have adopted the fashion of wearing a long beard from the Parthians, among whom he had so

long resided; it is therefore curious to find that the first coins which he struck after his return do *not* exhibit the long and flowing beard so characteristic of his later portraits.⁶¹

In connection with this subject it may be worth while to notice that, while the head of Demetrius on the coins of Tyre and Sidon seems to be conventional, and presents a mere continuation of that found on his earlier coins struck in those cities, there are some which have the eagle on the reverse, and by their weight unquestionably belong to the Phœnician series,⁶² which have the head with a long beard, as on the series with the Zeus type. One of these is described by Miounet, and a similar one is in my cabinet, though there appears to be none in the British Museum. They both have the date ΕΠΡ (185), with three monograms in the field, one of which is the well-known Ϟ usually supposed to designate Ptolemais. The coins in question may therefore have been perhaps struck in that city. But this monogram is of such frequent occurrence, that I cannot feel its evidence to be conclusive.

2. *Obv.*—Head of Demetrius, beardless, diademed.

Rev.—Eagle standing, to left, with palm-branch in front; leg. ΔΗΜΗΤΡΟΥ ΒΑΣΙΛΕΩΣ, in the field, behind the eagle, an aplustre and ΣΙΔΩ; in front the date ΕΠΡ, and beneath it Ϟ. *AR.* Pl. VI. Fig. 8.

It is remarkable that no silver coins of the second reign of Demetrius, struck at Sidon, are found in the Catalogue,

⁶¹ It may be worth while to notice that the letters ΔΝ, which are found in the field of this coin, occur also under the throne of Zeus on one of somewhat similar fabric, with the ordinary bearded head and the date of ΔΠΡ.

⁶² The one in my collection weighs 214 grains, though a good deal battered. It is figured in Plate VI. Fig. 7.

though there is a long list of those at Tyre, extending from the year 183 to 187.⁶³ Nor are there any in Mionnet. The tetradrachm in my collection is therefore of interest as an apparently unique specimen of his coinage in this city. The head on the obverse is the conventional one, similar to those found on the Tyrian coins.

It may be added that this is, as far as I am aware, the latest tetradrachm struck at Sidon, of the Phœnician types and standard, the coins struck in that city under Cleopatra, Antiochus VIII., and Antiochus IX., being tetradrachms of the ordinary Syrian standard, with the same types as the other coins of those monarchs, but characterized by the addition of the letters ΣΙΔΩ ΙΕΡΑΣΥ in the field.

ALEXANDER II., ZEBINA.

1. *Obv.*—Head of Alexander, diademed.

Rev.—Zeus seated, and holding Victory, as usual; leg. ΒΑΣΙΛΕΩΣ ΑΛΕΞΑΝΔΡΟΥ, in field to left the letters ΙΣΙ; beneath the throne Δ and a star above it. *R.* Size 8. Wt. 258 gra. Pl. VI. Fig. 5.

I have thought it worth while to present this coin to my readers, though it is not properly speaking a new variety; but the execution, as well as the style of art, of the head on the obverse is so superior to that found on the ordinary coins of Alexander II. that it presents a far more trustworthy portrait of that monarch than any yet published. At the same time the character of the head is sufficiently like to that on the ordinary coins to show that the difference is in the artist, not in the subject. It is very singular that the mint-marks on the reverse should

⁶³ There are, however, copper coins struck at Sidon with dates from 182 to 185.

he exactly the same as those found on other coins of the same king, with portraits of the usual type; the letters **ΙΣΙ** occurring on one of those in the British Museum, and a similar one in my own collection, and the letter **Δ** and the star being also found beneath the throne.

2. *Obv.*—Same head, but of very inferior work.

Rev.—Same type and legend: in field in front the monogram **ΙΡ**, and beneath the throne **Υ**; in the exergue the date **ΙΠΡ**. Plate VI. Fig. 6.

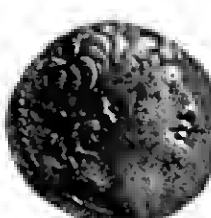
Dated coins of the reign of Alexander Zehina appear to be very rare. There are none in the British Museum, or in the Duane collection, but Pellerin has figured two, with the dates **ΘΠΡ** and **ϠΡ** (189 and 190), and Mionnet has described another, similar to my coin, with the date **ΙΠΡ**. I have also one with date of **ΘΠΡ**, as on the first of Pellerin's figures. The obverses on both are of very inferior execution, and though the monograms are not exactly the same, there can be little doubt that all these dated coins proceed from the same mint. They all belong also to the last years of his reign.

ANTIOCHUS VIII., GRYPUS.

Obv.—Head of Antiochus, of somewhat youthful character.

Rev.—Eagle standing, to left, behind, in the field, the date **ΓϠΡ**, and in front **Μ**, leg. **ΒΑΣΙΛΕΥΣ**
ANTIOXOY. Plate VI. Fig. 9.

Mr. Gardner has figured in the Catalogue a coin of Cleopatra and Antiochus VIII., with an eagle on the reverse, of precisely the same style of work as the coin here described, but with the date of **ΒϠΡ** (192), and also another of Antiochus IX. with the date **ΛΑΣ** (201). In both these cases, the monogram in the field is **Ξ**, which Mr. Gardner regards as intimating that the coins in



question were minted at Sycamina, a small town on the coast of Syria, the name of which is not found on any other coins of the Seleucidan series than this group. There can be no doubt that the monogram Σ stands for ΣY , its frequent occurrence on coins of this very series in the common form $\iota\epsilon\rho\acute{\alpha}\varsigma \acute{\alpha}\sigma\acute{\iota}\lambda\omicron\upsilon$ is conclusive on this point; but I can see no reason for assuming it to be a mint-mark of place, and the attribution to Sycamina appears to me in the highest degree improbable. The earliest geographical mention of such a place is found in Strabo, who notices it in connection with several other small towns ($\pi\omicron\lambda\acute{\iota}\chi\nu\iota\alpha$) in the neighbourhood of Mount Carmel, which, he says, were "names and nothing more."⁶⁴ But Mr. Garduor finds an argument in favour of Sycamina having once been a place of importance in the fact that "in the year B.C. 103, Ptolemy Lathyrus landed at the port (?) of Sycamina with an army of 30,000 men." Now, with all deference to Mr. Gardner's judgment, this appears to me to prove exactly the contrary. Josephus, from whom he derives the statement, says nothing of "a port," or "a city," but merely speaks of "a place called Sycamina."⁶⁵ And it is evident that an invader, landing with a large army in a hostile country, would naturally choose a part of the coast where there was *not* any strong city or fortress to oppose his debarkation, just as was done (*ex. gr.*) by the British troops when they landed in the Crimea, or in Egypt in 1801. But a case still more in point is cited by Mr. Williams (in Dr. Smith's "Dictionary of Ancient Geography," article "Sycamina,") that in 1831 Ibrahim Pasha landed part of his troops for the attack on Acre at

⁶⁴ "Strabo," xvi. p. 758.

⁶⁵ Josephus, "Ant. Jud." xiii. 12, § 3.

the very place (Kaifa) which is supposed to occupy the site of Sycamina, from whence Ptolemy Latbyrus merched against the same city.

I cannot therefore think that there is any reason to believe that an insignificant town like Sycamina ever struck coins with its mint-mark, least of all such magnificent pieces as the unique tetradrachm of Cleopatra, which has the same monogram in the field. But all probability in its favour is removed by my coin, which is absolutely similar in stylo to that figured by Mr. Gardner (Pl. XXIII. Fig. 2), and was struck in the very next year, the first of the solo reign of Antiochus. Yet it has in the field of the reverse, instead of the monogram of ΣY , one which is in all probability composed of MY , and is one of frequent occurrence throughout the Seleucidan series.⁶⁶ It may be added that Pellerin has figured two other coins of the same king with the type of the eagle standing, and the dates $ΣΠΡ$ and $ΗΠΡ$; but having in the field two *different* monograms. If the position of the monogram Σ on the coins figured by Mr. Gardner is, as he himself remarks ("Introduction," p. xxx.), such as to render it "all but certain that it is intended to stand for the name of a city," what becomes of these different monograms occupying the same place on other coins of precisely similar style? This similarity of stylo is such as, in the case of my coin, to leave no doubt in my mind that it proceeds from the same mint with that figured by Mr. Gardner. Pellerin's figures are not sufficiently charac-

⁶⁶ It is found (*e.g.*) on the coin of Demetrius II., above described, which was unquestionably struck at Sidon, as well as on others of the same monarch, with the bearded head and the seated figure of Zeus, which were certainly not coined in Phœnicia (see Catalogue, p. 76).

teristic to afford the same assurance, but they have every appearance of being intended for coins of precisely similar character.

It is discouraging to find doubts and difficulties thickening around us, and to be sometimes obliged to retrace our steps, when we appeared to have gained a distinct point in advance. But the fact is that the coinage of the Seleucidæ is still very imperfectly known to us. The collection of this series in the British Museum is far from being as extensive and complete as that of several other departments; and much as we owe to Mr. Gardner for his valuable catalogue, there is much to be done in the way of accumulation of materials before we possess such a knowledge of the coinage of the Macedonian kings of Syria as we derive from the unrivalled collection in the same museum of their neighbouring and contemporary monarchs, the Ptolemies of Egypt. The admirable monograph of this series, just published by Mr. Poole, may be considered as not only placing the whole subject on a secure basis of investigation, but leaving very little to be gleaned by the future numismatist or collector.

In this state of things I have thought it desirable to bring before the Numismatic Society this notice of all the more interesting coins in my collection, with a view to contributing my *quota* to the assemblage of that mass of materials which is necessary to a really satisfactory view of a coinage that has been long a favourite object with collectors, but which has of late years received too little attention from numismatists.

EDWARD H. BUNBURY.

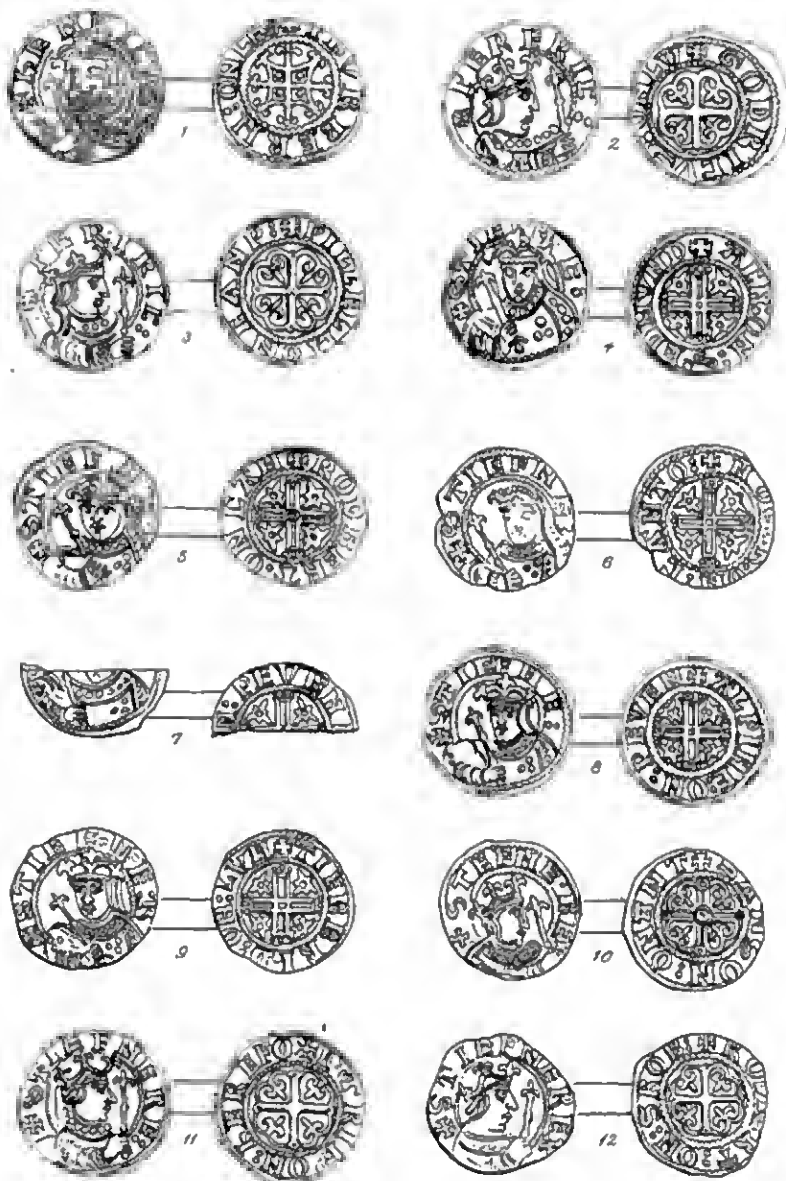
VIII.

ON A HOARD OF EARLY ENGLISH COINS OF HENRY I. AND STEPHEN, 1135—40.

IN February of this year, while trenching a piece of waste land in the parish of Liuton, about three miles from Maidstone, some labourers struck upon a small earthen vessel but fifteen inches below the surface. The jar was broken by their tools before it was discovered, when it proved to contain a number of coins which, on examination, turned out to be of Stephen, with a few of Henry I. included among them. Many of them were cut into halves and quarters, evidently for circulation as halfpennies and farthings ("fourthings"), v. Fig. 7 in the accompanying Plate VII.

About a hundred of the coins came into my hands, the remainder—about eighty pieces—passing into the possession of a gentleman of my acquaintance residing near the spot, by whose courtesy I have been enabled to closely examine all and describe such varieties as are not contained among those in my possession. The results will be found fully tabulated below; and the details will, I trust, prove interesting to numismatists, especially such as more particularly study the period of English History represented by the hoard.

On inquiry I find that an ancient building, near the scene of the find, has always been considered, with apparently little foundation, as having been, centuries ago, a



J. I. Lee.

COINS FOUND IN KENT.

house of call, hostel, or "Travellers' Rest," by which latter term it has long been known, standing on the ancient main road running through the southern part of the county, now little more than a bye-lane, another and better road having long superseded it.

This idea, hitherto quite legendary, receives some support from this discovery, for, from the great number and variety of mints among coins of one period, it seems probable that the host of this ancient hostelry, having saved much of the profit derived from entertaining travellers *from all parts*, had hidden his savings during the troublous period 1135—50, where it has lain until now unearched.

The most notable feature in this hoard is the great number of mints represented. With the exception of the great hoard found near Watford, and described by Mr. Rashleigh in the "Num. Chron.,"¹ probably never before have so many been known to occur upon pieces of one find, struck within so short a period, for, of the forty-four mints known (*vide* Hawkins) to have struck under Stephen's authority, at least twenty-nine occur in addition to three mints previously unknown to have coined under this King; five mints also appear of Henry I.

Of distinctive types there are very few, the whole number of varieties only giving the following:—Henry I., Hks. 255, seven varieties, five mints; Stephen, Hks. 269, thirty-nine varieties, seventeen mints; Hks. 270, forty varieties, twenty-five mints; Hks. 632, two varieties, two mints (Pl. VII. Figs. 2 and 3); and one unpublished piece having, rev., annulet enclosing a pellet in centre of double cross, the usual fleurs-de-lis in each angle (Fig. 10).

Of the few pennies (*v.* Fig. 1 for a fine specimen of

¹ First Ser. vol. xii. p. 188.

Obester) and one halfpenny of Henry I. there is nothing new to record; of Stephen, H. 269, there are, however, many mints represented hitherto unknown to exist of this type, viz. Bristol, Cambridge, Canterbury (Fig. 5), one beautiful specimen reading CANTO: (Fig. 6); Exeter, Hastings, Lewes, Norwich (reading NOR, NORP, NON, and NORIE); Pevnsey (two splendid pieces of this previously unknown mint, Figs. 7 and 8); Sandwich, Bury St. Edmunds (Fig. 4, one very fine piece only), Lincoln, and York.

Of Stephen, H. 270, there is one piece of Durham, also one other of Hythe, to both of which the same remark applies as to Pevnsey above.

The unpublished piece (Fig. 10) is a neat and finely-preserved piece, and appears to be of the Southampton mint.

The two pennies (H. 632) attributed to Rogor, Earl of Warwick, which were in the hoard and are in the possession of the gentleman already mentioned, are very fine pieces, the obv. and rev. legends being in both cases almost complete, that of London (Fig. 2) is exactly as described by Mr. Rashleigh and in Hawkins. The other (Fig. 3) is valuable as proving the attribution to Warwick of the piece reading PILLEM:ON...P, as suggested by Mr. Kenyon, in the now edition of Hawkins, to be untenable, this coin reading ON:LANP=Canterbury. Both coins appear to be from the same die, the final P being all that could be seen of the name of the mint on the previously discovered piece.

The coin I ascribe to Durham reads ON:DVN.O✱, so that it can hardly be placed to any other mint. That which I regard as being of Hythe reads ON:IDE✱. I trust I am therefore right in thus attributing it. Of Norwich one piece reads NOR, two others NON, two others

.. RIE; these latter I at first placed to the credit of Warwick until I met with a third which read in full, NORIE. One specimen presents at the close of the rev. legend the letters SIN only. I can but place this to Shaftesbury. I regret that the hoard should not have been examined and described by some more experienced numismatist than myself, but being requested to send a paper on the subject to the Society, I thought it better to do so to the best of my ability before the parcel became scattered and disunited. I hope, therefore, that any errors of judgment or shortcomings, in this my first communication, will be overlooked, and that I may receive the benefit of the far greater knowledge of other members who have made this particular series their especial study.

A glance at the table below will show a great variety of renderings of Stephen's name and title, those specimens upon which the *whole* obv. legend is visible presenting the following different readings:—STEFNE, STEFNIE, STEINE, STIEFE, STIEFN, STIEFNE, STIEFNE: R, STIEFNE: RE, STIENE, STIFENE, STIFNE, STIFNE: R, STIFNE RE, STIFNIE, STEFNE: REX (Figs 10 and 12); one commences ✚TS (*sic*), and another ends EX, which latter termination, exclusive of the initial cross, has not, I believe, before been noticed.

One other point worthy of notice, while speaking of these pieces, is the great diversity of weights, for though all are as they left the die, some are so light—speaking only of whole pennies—that it seems improbable they could have been issued from the royal mint, and therefore, though all are of good silver, the lighter pieces may possibly be haronial productions. This is also a point for settlement by those who have a deeper knowledge of the series than myself. I can but draw attention to the fact that, whereas

the majority weigh as usual 20 to 22, or even as high as 23 grains, others, though finely preserved, weigh as low as 18, 16, 15, 13, and even 12 grains, the light specimens being all of type Hawkus, 270.

In no one instance was it found possible to put together any halves or quarters. It is thorohy proved, the more conclusively, that the division into halfpennies and farthings was not a special act done by the owner of the hoard, but a general custom to supply the deficiency occasioned by a total lack of small change; the division is also common to many mints.

Finally, from the appearance and condition of the pieces, as well as the fact that they almost exclusively consist of the two types hitherto considered the earliest of Stephen, added to a few of Henry I. of one type only (Fig. 1), it appears conclusive that Hks. 255 was the last type of Henry I., and that the parcel must have been deposited somewhere between the years 1135—1140.

GEORGE WAKEFORD.

COMPLETE DESCRIPTION OF ALL VARIETIES CONTAINED IN
FIND OF COINS, TEMP. HENRY I.—STEPHEN, AT LINTON,
FEBRUARY 2, 1883.

HENRY I. (Hawkins, 255.)

Obverse.	Reverse.	Wt. grs.	
1.	ÆDGAR : ON : LV . .	21	(London)
2. ✠HENRICVS	. . AMVND : ON : LVND.	22	"
3. . . . .	. . . . . LVN	10	" The only half-penny of Henry I. in the whole find
4. ✠HENR . . S	. . . . R : ON : EAN	21	(Canterbury)
5. ✠HENRICVS	THVRBVN : ON : LES	22	(Chester) Fig. 1
6. . . N . . .	. . N : ON : GIP :	21	(Ipswich)
7. . . ENRICVS	EDS . . N : NOR .	21½	(Norwich)

STEPHEN. (Hawkins, 269.)

1. STIEFNE	ALFRED : ON : . . IS	19	(Bristol)
2. STI . . N . RE	. . VL : ON : GRAN	19½	(Cambridge)
3. ✠STIFFNE	ROGER : ON : LAN :	22½	(Canterbury)
4. ✠STIEFNE .	RODBERT : ON : LAN :	21	" Fig. 5
5. ✠STIEFNE :	NO . . R : ON : EANTO :	22	" Fig. 6
6. . . FN :	. . ER : ON : EA .	11	(Exeter) a halfpenny
7. . . E . .	. . . . AES	12	(Hastings) "
8.	OSBERN : ON : GIP .	22½	(Ipswich)
9. S . . IENER	A . . RIC : ON : GIPE	22	"
10. . . FNE :	GER . . . GIP :	11	" a halfpenny
11. ✠ . . IEFNE	. . . ON : LEV	22	(Lewes)
12. STIEFNE	LA . . R : ON : LEP :	18	"
13. STIE ..	DERMER : ON : NIE	20	(Lincoln)
14. . . FNE :	. . . ON : NI	6	" a farthing
15. ✠STIEFE	EDPARD : ON : LVN .	20	(London)
16. ✠S . . . E	GEFREI : ON : LVN :	22	"
17. STIEFN . .	GEFREI . .	12	" a halfpenny
18. ✠STIEFNE	GODARD : ON : LVN :	23½	"
19. ✠STIENE :	RAMVND : ON : LVN ✠	20½	"

Obverse.	Reverse.	Wt. grs.	
20. ✠TS . (!)	RAMV . . .	10½	(London) a halfpenny
21. ✠STIEFNE :	RODBERT : ON : LVN	22	"
22. . . IEFN .	RODBERT . . .	10½	" a halfpenny
23. ✠STIFNE : R	TIERRRID : ON : LVN :	20½	" Fig. 9
24.	TIER ND : ✠	12	" a halfpenny
25. STIFNE :	WALTIER : ON : NON :	20	(Norwich)
26. . . . E :	. . . ON : NON :	13	" a halfpenny
27. ✠STEFN . .	XIL . . ON : NOR :	22½	"
28. ✠STIEFNE	RAWLF : ON : . . RIE :	19	"
29. ✠STIE . .	RA RIE ✠	12	" a halfpenny
30. ✠ST . . ENE	ALPINE : ON : PEVEN :	22½	(Pevensey) Fig. 8
31. ✠S . . . NE	. . NE : ON : PEVEN :	22	"
32. ✠ E	. . . . . N : PEVEN :	10	" a halfpenny, Fig. 7
33. ✠STIENE	AFN : ON : S. ADMVND ✠	21½	(St. Edmunds Bury)
34. ✠STIEFNE	IV · RIE : ON : SAN	22½	(Sandwich)
35. ✠ . . . . .	. . L : ON : SAN :	11	" an extra fine halfpenny
36. . . . FNE	BAI TEF ✠	10	(Thetford) an extra fine halfpenny
37. ✠S . . . .	. . . ON : PAL .	11	(Wallingford) a half-
38. . . . IENE	ANVLF : ON : . . ER.	20	(Warwick) {penny
39. ✠S . . . . .	. . . ER : ON : EO . .	7	(York) a very fine half- penny

AN UNPUBLISHED PIECE OF SOUTHAMPTON. (Fig. 10.)

+STEFNE · REX | SANSON : ONANT | 16 | (Southampton) Fig. 10

ROGER, EARL OF WARWICK ?

1. ✠PERERIE :	GODRICVS : ON : LV ✠	22	(London) Fig. 2
2. ✠PERIRIE :	✠PILLELM : ON : EANP :	15	(Canterbury) Fig. 3

STEPHEN. (Hawkins, 270.)

1. TIEFNE :	RODBERT : ON : . . .	17	(Canterbury, probably, v. No. 4, List of H. 269)
2. STIEFNER	. . N : ON : . . RIST	20½	(Bristol)
3. ✠STE . . .	. . M : ON : DICE ✠	12½	(Chichester)
4. STIEFNE	GODPINE : ON : DICE	19	"

Obverse.	Reverse.	Wt. grs.	
5. . . EFN . .	. . . ERLE	5	(Chichester) a farthing
6. STEINE	. . . N : ON : FOLE	17½	(Oolchester)
7. ✕STI . . E :	. . . ON : DVN . O ✕	22	(Durham)
8. . . EFNE :	. . . D : ON : E . .	11	(Exeter) a halfpenny
9. STEFNE	GIR . . ON : PAS .	22	(Hastings)
10. ✕S . . . R .	. . IL : ON : RA	10	" a halfpenny
11. ✕STIEFNE RE :	. . . TR : ON : REREFO ✕	22	(Hereford) Fig. 11
12. +STIEFNERE :	ESTMVND : ON : . IDE+	18	(Hythe)
13. . . . N . .	. . . . . GPI	20½	(Ipswich)
14. . . ERE :	. . . ON : LE :	21	(Leicester)
15. STI	. . IN : ON : NIL	18	(Lincoln)
16. . . NR .	. . N : NIL	6	" a farthing
17. STIENE	ÆIGIER : . .	20½	(London?) doubtful
18. STIEFN	ÆLVRED : ON : LVN	21	(London) [what mint]
19. . . EFNE :	BA . . N : LV ✕	12½	"
20. ✕ . . E . .	BRIMAR : ON : LVND :	22½	"
21. ✕ST . . EX	SANAR : ON : L . .	19	"
22. ✕ST . . IERE :	SEFPINE : ON : LVN .	22½	"
23. +STI . .	REIN N ✕	21½	"
24. STIENER :	TOVI : ON : LVND	19	"
25. ✕ . .	. . N : NORP .	11	(Norwich) a halfpenny
26. . . . .	. ON : NO	5	" a farthing
27. STIFNE	RICARD : ON : SN . .	20½	(Nottingham)
28. ✕STIFNEREX	. . TAN : ON : NORP	21	(Northampton)
29. ✕STIEFNE :	RICARD : ON : SAN : ✕	21	(Sandwich)
30. ST . EFNE	. . . . . SIR ✕	21	(Shaftesbury)
31. ✕STIEFNEREX	RODBERT : ON : SROB :	18	(Shrewsbury) Fig. 12
32. STIEFN :	RODBERT : ON :	17	" probably
33. ST . .	. . . N : SVD . .	5	(Southwark) a farthing
34. . . NE : RE	. . . N : ON : SVDB	21	(Sudbury)
35. STIFNERE	GEFERIE : ON : TE	21	(Thetford)
36. ST . . RE	GEFREN : ON : TE	19	"
37.	STAN . . O . . VER :	22	(Warwick)
38. . . . EX	GODPINE : ON : P . .	22	(Winchester)
39. ✕STN	GODPIN N ✕	9	" a halfpenny
40. ✕ST . . IERE :	STINIE : ON : PIN .	22	"

LIST OF MINTS
 REPRESENTED IN THE LINTON FIND,
 FEBRUARY 2, 1883.
 HENRY I. AND STEPHEN.

MINT.	HENRY I. Hks. 255.	STEPHEN.			
		269	270	632	Unpub. type.
Bristol . . .		×	×		
Cambridge . . .		×			
Canterbury . . .	×	×			
Chester . . .	×				
Chichester . . .			×		
Colchester . . .			×		
Durham . . .			×		
Exeter . . .		×	×		
Hastings . . .		×	×		
Hereford . . .			×		
Hythe . . .			×		
Ipswich . . .	×	×	×		
Leicester . . .			×		
Lewes . . .		×			
Lincoln . . .		×	×		
London . . .	×	×	×	×	
Norwich . . .	×	×	×		
Nottingham . . .			×		
Northampton . . .			×		
Pevensey . . .		×			
Saint Edmonds . . .		×			
Sandwich . . .		×	×		
Shaftesbury . . .			×		
Shrewsbury . . .			×		
Southampton . . .					×
Southwark . . .			×		
Sudbury . . .			×		
Thetford . . .		×	×		
Wallingford . . .		×			
Warwick . . .		×	×		
Winchester . . .			×		
York . . .		×			
Uncertain . . .		×	×		



IX.

ON A NEW PIECE OF BERMUDA HOG-MONEY OF THE CURRENT VALUE OF III*d.*

IN former numbers of the *Chronicle*¹ I have given some account of the peculiar currency known as hog-money, struck for circulation in the plantation of the Somers Isles under the Charter granted to the Bermuda Company by James I. in 1609. These pieces were not known to Ruding, and have always been extremely scarce; pieces of *xiid.*, *viid.*, and *iid.* have been described and figured—the last from a specimen found in 1877, and at the time unique, but another was found last year at St. George's. I have now the good fortune to be enabled, by the kindness of Mr. J. Kermack Ford, to present a fourth variety, hitherto unknown, of the value of *iiid.* Mr. Ford found it some years ago, by the merest accident, in turning over a quantity of old copper coins in a dealer's hands.

Extravagance or over liberality were faults never attri-

¹ N.S., vol. xvi. p. 158, and vol. xviii. p. 166.

huted to the Bermuda Company. That they thought it necessary to have eight dies sunk—two for each of four varieties of currency—speaks for the very early stage of their history as a corporation, at which the order must have been given. It smacks of enthusiasm; we have no documentary evidence of the scale of the provision, and very little mention of the circulation of the coins, which the settlers never accepted with cordiality.

The following is a description of the coin.

Obv.—A three-masted, high-pooped ship under sail, between the letters S—I.

Rev.—A Hog. The Roman numeral III. above it.

The letters S—I for Somers Islands are a little doubtful, the marks representing them being *possibly* a part of the ship, which is not well defined. They are certainly wanting in the pieces of *xii**d.* and *vi**d.*, which however bear the words "SOMMER ISLANDS" in full; but there is a trace of the I. in the piece of *iii**d.*

J. H. LEFROY.

X.

AUSTRALIAN CURRENCY.

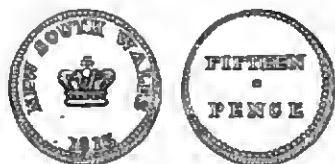
THE HOLEY DOLLAR.

AMONG the expedients to which some of the British Colonies have been driven in former times, through the scarcity of currency, there is none more singular than the practice followed for a short time in New South Wales, of making the Spanish dollar, worth 4s. 2d., do duty for six shillings and threepence. This was effected by punching out a circular disc from the centre, which passed for one shilling and threepence, and boldly stamping "five shillings" on the annular portion left. As these coins, popularly called "holey dollars," are extremely scarce,



an account of one of them may be acceptable to the Society. It is a pillar dollar, bearing on the obverse FERDIN. VII., DEI GRATIA. 1810, and round the edge of the perforation, which is milled, NEW SOUTH WALES. 1813. On the reverse HISPAN. ET. IND.

REX . ME · 8R . J . P, and round the perforation FIVE . SHILLINGS. 1813. The dump, or fifteenpenny piece,



which was stamped out of the centre of the dollar, is shown in the accompanying figure, which is engraved from a specimen kindly lent by Mr. F. W. Pixley, who also has an example of the perforated dollar. As it was not until 1813 that these pieces began to replace promissory notes and other forms of paper money in the currency of the colony, this is one of the earliest pieces struck. The punch and stamps were very likely made in the colony, to which the system of transportation then in force supplied skilled workmen in almost every art. It is, however, not very skilfully done. The perforation is not central, and the piece is much "buckled" by the blow. These pieces continued current until 1829. The present specimen was found in Tasmania, with about fourteen more, in 1881, possibly the hoard of some bushranger; with them were two or three dumps, as the centre pieces were called, but I was unable to acquire one of these. Montgomery Martin remarks:—

"Previous to 1817 the circulating medium of the colony consisted principally of the private notes of merchants, traders, shopkeepers, and publicans, the amount being sometimes as low as 6d."—*Hist. of Brit. Colonies*, p. 432.

He does not mention the converted dollars, but dollars and rupees were current down to 1826.

J. H. LEFROY.

XI.

SEVENTEENTH CENTURY TOKENS OF HAMPSHIRE NOT DESCRIBED IN BOYNE'S WORK.

THE number of unpublished tokens in the following list shows that Mr. Boyne had not the same efficient help for several of the towns in this county as he had for Andover, as at page 98 of his standard work Mr. Boyne states, "These descriptions of Andover tokens (nineteen in number) were kindly communicated to me by Mr. Samuel Shaw of that town." Then adds, "The list may be presumed to be complete," and, in fact, only one more token of that town (No. 4 in following list) has been found since 1858, the date of Boyne's publication.

The following seventy-eight additions will give above half as many more to those in Mr. Boyne's list of the county, whilst a dozen fresh ones are added to Newport, Isle of Wight, and fifteen, including two varieties of Boyne's numbers, are added to Portsmouth. There are five places of issue not recorded by Boyne: Crondall, near Farnham; East Meon, near Petersfield; Hartley Row, near Odiham; Havant, near the Sussex boundary; and Hurstbourne, a few miles from Andover.

The late Mr. S. Shaw, of Andover, who died in November, 1881, took great interest in the tokens of his native county, and from his researches and collection I have

gained several unpublished descriptions; also from the late Mr. H. Christie, of London, who before his last illness acquired many of those in the following list, and from time to time informed me of them. Since then I have bought the Hampshire tokens of Mr. J. S. Smallfield, when his large collection was dispersed, containing above twenty unpublished specimens; and the remaining descriptions were kindly sent to me with all the tokens for inspection by Mr. R. T. Andrews, Hertford (marked A.), and Mr. Clements, Peckham Rye, S.E. (C. under Nos.)

We gain some interesting particulars about the 17th century town pieces from the municipal records of various boroughs. A few years before these local tokens were finally suppressed, in 1672, various English corporations became sensible of the fact that an enormous profit was realised from the tokens when largely circulated, and from "Sturt's Historical Notes on Grantham, 1857," p. 71, we have the following interesting account of what took place in that borough in 1667: "Whereas, Mr. Thomas Short, Alderman, hath acquainted this Court that several corporations have set forth brass halfpence with the town arms upon them for the benefit of the poore of varions towns, and that it might be very advantageous to this corporation to do likewise. Whereupon the said Court orders that the present Chamberlain do send to London for brass halfpence with the chequers (town arms) on the one side, and Grantham, with the year of our Lord, on the other side. And to have round the rim, 'To be exchaing'd hy the overseers of the poor,' and that the same may be obtained as soon as may be." The historian adds, "Many of these tokens are still in existence, but they are all of copper, not of brass." From the researches of various collectors, fifteen tokens of Grantham are known, besides

the town-piece, seven of which are not in Boyne, but they were all issued before 1667.

A still more stringent civic proclamation emanated from the municipal authorities at Winchester, in 1669, which being in the county now under consideration (and the proclamation, I believe, never before published), is now given *in extenso* and *verbatim*, with the original spelling:—

"7 Sept. 1669. Whereas div^{se} p^{rs}one have of late in sev^{all} places taken upon them to coyne, or cause to be coyned, great nmbers of brass halfe-pence and ffarthings, and to vent them to the King's subiects, whereby this Citty as well as other places dothe exceedingly abound with the saydo Halfe-pence and ffarthings, w^{ch} doth already, and iff not tymely p^rvented, will dayly more and more bringe great damage to the Inhabitants of thie Citty, for by reason of the death of some of those persons w^{ch} sett forth those halfpence and ffarthings, and that others of them doe remove theyr dwellings, or abscond themselves; many of those halfo-pence and ffarthings will not passe from man to man, soe that those p^{rs}one in whose hands they doo remain, must needs suffer damage thereby. And also many of those balfe-pence and ffarthings are brought from townes farr remote from this place, and with whom this Citty hath no comerce or trade, by reason of all w^{ch} our Inhabitants are pntt to great tronble in takeing moneys for theyr wares, and do dayly receive damage thereby.—Now that these growing inconveniences may be redressed in tyme, and such small changeing money be provided, that noe man for the future may lose in receiving the same: It is att this Assembly agreed upon, and accordingly ordayned, that a convenient number of hrasee Halfo-pence and ffarthings shall be provided by the Citty out of the comon stocke thereof, with ench a etampe upon them as they may be publiquely known to be the moneys belonging to the Citty, and that these halfe-pence and ffarthings thus provided (and noe others) shall currently passe in thie Citty, and that noe man may enffer damage by taking these balfe-pence and ffarthings thus sett forth, It ie by this Assembly agreed upon, that this Citty shall exchange all ench halfe-pence and ffarthings for current money of England, when any p^{rs}on ehall give convenient notice soe to doo.—And it is further agreed upon and ordayned, that from and after the first day of November next ensueing, noe other halfe-pence or ffarthings shall currently passe in this Citty hut such as he sett forth as aforesayd.—And it is also

agreed upon at this Assembly, That such persons who are members of this Corporacion shall receive reasonable satisfaction for any losse they shall sustain by calling in such halfe-pence and farthings eforesayd: And it is also agreed upon, that yf any benefitt arise by setting forth the sayd halfe-pence and farthings, It shall be ymployed for the use and benefitt of the poore. And if any person within this Citty shall after the tyme aforesayd, vent or offer in payment any Halfe-pence or farthings other than such es shall be stamped with the aforesayd stampe of this Citty, every p'son soe offendinge shall for every such offense forfeite the sum of fyve shillings to the use of the Chamber of this Citty, to be levyed by distresse, and sale of the goods of the offender." ¹

Other boroughs, about the same period, ordered the considerable profits arising from the issue of their town-pieces to be expended in various ways. At Stamford it was ordered "to be laid out for, and towards y^e repaying of y^e Guildhall" (see "Simpson's Lincolnshire Tokens," p. 46), and the corporation of Henley-on-Thames, Oxon, ordered the profit, £46, arising from 65 lbs. of tokens to be expended "in repairing the bridge" (see "Num. Chron." Third Ser. vol. i. p. 164).

LIST OF UNPUBLISHED HAMPSHIRE 17TH CENTURY TOKENS.

ABBREVIATIONS IN THE FOLLOWING LIST:—The letter G. under the No. designates those in the writer's collection; C. those belonging to Mr. Clements; and A. to Mr. Andrews of Hertford; those with the initial S. belonged to the late Mr. Shaw of Andover. The ownership of those without initial is now unknown.

ALRESFORD.

1. *Obv.* 1A. WITHERS. ALRESFORD.—Man making candles.

O.

Rev. TALLOW. CHANDLER.—I. I. W.

This issuer's $\frac{1}{2}$ d. is in "Boyne," p. 97, No. 2.

¹ Transcript from the "Municipal Archives of Winchester," by the late Charles Bailey, Esq., Town Clerk, 1856.

ALTON.

2. *Obv.* THOMAS . BRAIMAN.—T. R.
 C.

Rev. ALTON . IN . HAMPSHIRE.—H. B.

The *first* initial on *Rev.* is that of the issuer's wife.

3. A variety of Boyne 5 is dated 1663 on the *Rev.*
 G.

The writer has both B. 5 (dated 1666) and the above.

ANDOVER.

Mem.—The late Mr. Shaw said that he had never seen or heard of No. 9 with the date 1664, and believed none were struck with that date.

4. *Obv.* WILLIAM . ORAM . IVN (IOR).—A glove.
 S.

Rev. IN . ANDOVER . HAMPSHIRE (*sic*).—W. M. O.

BASINGSTOKE.

Note to B. 28 and 30. The two issuers, Henry Barfoot and John Coleman, were joint churchwardens of St. Michael's, Basingstoke, in 1670, and their names are recorded with that date on the then new tenor bell.

5. *Obv.* JOHN . COLEMAN . THE ELDER.—A raven.
 G.

Rev. Same as in Boyne.

6. *Obv.* JOSEPH . MANSFIELD . GROCER . IN. — A sword and
 S. helmet.

Rev. BASING STOKE . HIS MARTY DYBBLE TOKEN 1669.—
 (In six lines, heart shape.)

There are two varieties of B. 32, one reading on.

7. *Obv.* BARNARD . REVE.—An angel holding a scroll.
 O.

Rev. OF . BASING . STOKE.—E. M. R.

8. *Obv.* Legend as No. 7.—Angel with arms across the
c. breast.

Rev. IN . BAZINGSTOKE.—B. M. R.

Reve is an older form of the name than Reeve. The Angel Inn is still in existence in the town (late S.S.).

BISHOPS . WALTHAM.

9. *Obv.* JAMES . BELLAKLEY . 1666.—The Grocers' Arms.
A.

Rev. IN . BISHOPS . WALLTON.—HIS HALFPENNY. I. B.

CASTLE HOLD.

10. *Obv.* JAMES . SMITH . IN.—A castle.
O.

Rev. CASTILL . HOLD . NEWPORT.—I. E. S.

Castle Hold is in Carishrook parish, but forms the upper part of High Street, Newport, leading direct from thence up to the old castle. A variety of B. 39 (Edward Knight) will be found at No. 34 in this list, and was no doubt issued by the same person.

COWES.

11. *Obv.* PETER . COVRTNELL . 67.—P. S. C.
G.

Rev. IN . YE . WEST . COWES.—P. S. C.

CRONDALL.

12. *Obv.* CRVNDOL . IN.—Drapers' Arms in Shield.
G.

Rev. HAMPHIRE (*sic*).—E. A. P.

This strangely spelt token is much like the Liphook one (No. 24) in appearance, and perhaps by the same artist.

EAST MEON.

18. *Obv.* JOHN . WITCOMBE . AT . YE.—An angel.

C.

Rev. IN . EASTE . MEANE . 66.—I. M. W.

This old village gives its name to the hundred in which it is situated, and is four miles from its post-town, Petersfield. For a token of West Meon, see Boyne, p. 104, No. 126.

FAREHAM.

14. *Obv.* WILLIAM . DIDLESFOLD.—The Mercers' Arms.

A.

Rev. OF . FARAM . 1658.—W. D.

Spelt in the phonetic style not uncommon at the period.

GOSPORT.

15. *Obv.* JOHN . BRAMLEY . AT . YE . RED.—A lion rampant.

C.

Rev. LYON . IN . OOSPORT . 1667.—HIS HALFE PENY.

16. *Obv.* ANNE . GRAINGER . IN.—HER HALFE PENY.

S.

Rev. GOSPORTE . 1667.—A. G.

17. *Obv.* STEPHEN LOCK.—Two crossed keys.

S.

Rev. OF . GOSPORT . 1667.—S. D. L.

18. *Obv.* JOHN . MORGAN . AT . YE . ROYALL.—A ship in full sail.

G.

Rev. SOVERAION . IN . GOSPORTE . 1667.—HIS HALFE PENY.

I. N. M.

HARTLEY ROW.

19. *Obv.* ROBERT . RAYE . IN.—Arms, a chevron between three crosses botonées.

C.

Rev. HARTLEY . ROE.—R. R.

20. *Obv.* JAMES . SMITH . AT . THE . FENIX.—A Phoenix.

Rev. AT . HARTLE . ROR.—HIS HALFE PENY.

Hartley Row is on the old road between London and Salisbury, and was a busy place in the old coaching-days.

HAVANT.

21. *Obv.* THOMAS . HILDROP . OF.—A man making candles.

Rev. HAVANT . TALOW , CHANDLER.—T. M. H.

22. *Obv.* THOMAS . YOUNG.—T. M. Y.

C.

Rev. OF . HANANT (sic) . 1653.—T. M. Y.

HURSTBOURNE.

23. *Obv.* ROBERT . MYNDAY.—The Grocers' Arms.

C.

Rev. IN . HVSSTONE . 1664.—R. M.

This token was found in Hurstbourne-Tarrant, a village in the Andover district, and was probably issued there.

LIPHOOK (near Haslemere).

24. *Obv.* LIPHOOK . IN.—An anchor.

C.

Rev. HAMPSHEER.—1668 . W. E. S.

In the stage-coach times this was a halting-place for changing horses on the old road from London to Portsmouth.

LYMINGTON.

25. *Obv.* JOHN . BARWICK.—HIS HALF PENNY.

Rev. IN . LIMINGTON . 1667.—L. B.

26. *Obv.* THOMAS . OLEVEN.—The Grocers' Arms.

Rev. IN . LEIMINGTON.—T. E. O.

NEWPORT (Isle of Wight).

27. A variety of B. 63, with same legend and date, is full
C. $\frac{1}{4}$ d. size.

This token is $\frac{1}{2}$ of an inch wider and 7 grains heavier than B. 63, and may have passed for a $\frac{1}{4}$ d.

28. *Obv.* RICHARD . DOKE.—R. M. D.
G.

Rev. OF . NEWPORT.—1651.

29. *Obv.* JOSEPH . FOSTER . IN . NEWPORT.—HIS HALF PENT,
G. 1669.

Rev. IN . THE . ISLE . OF . WIGHT.—I. M. P. and a flower.

This token was kindly presented to me by Mr. Nathan Heywood, Manchester. For Joseph Foster's farthing, see B. p. 101, No. 67.

30. *Obv.* WILL . HANNAM . NEW.—Tallow Chandlers' Arms.
S.

Rev. PORT . ISLE . WITE.—W. H.

31. *Obv.* WILLIAM . HAPGOOD.—St. George and Dragon.
S.

Rev. NEWPORT . 1668.—HIS HALFE PENNY.

This description and the next were sent me by Mr. S. Shaw.

32. *Obv.* JOHN . E . HORR . NEW.—Detrited.
S.

Rev. PORT . ISLE . OF . WIGHT.—I. R. II.

The wife's initial is put on the *obv.* between the issuer's names, as is the case on several London tokens.

33. *Obv.* JOHN . IOLLIFFE.—I. E. I.
G.

Rev. IN . NEWPORT . 1655.—I. R. I.

34. *Obv.* EDWARD . KNIGHT . IN.—A castle.
G.

Rev. NEWPORT . ISLE . OF . WITE.—E. E.

35. *Obv.* ARTHUR . LEGG . 1656.—The Grocers' Arms.
G.

Rev. OF . NEWPORT.—A. I. L.

36. *Obv.* ANTHONY . MAYNARD.—Apothecaries' Arms.

G.

Rev. IN . NEWPORT.—A. E. M.

37. A variety of Eliz. Maynard, B. 69, reads on *rev.* ISLE OF
G. WITE, &c., instead of ISLE . WITE.

The writer has both tokens.

38. *Obv.* WILL . NEWLAND OF . NEWPORT.—The Grocers' Arms.

Rev. IN . ILLE . OF . WEIGHT (*sic*).—W. G. N.

39. *Obv.* JOHN . THORNTON.—A thorn-bush.

G.

Rev. IN . NEWPORT.—I. E. T.

ODIHAM.

40. A variety of B. 76, has in field of *Obv.*—A shovel.

S.

Rev. OF . ODIVM . (no date).—I. A. S.

OVERTON.

41. A variety of B. 78, is dated on *Rev.* 1668.

G.

In other respects it is the same as W. Speer's token.

PETERSFIELD.

42. *Obv.* JOHN . HORSENAILE.—A pair of stays . I. S. R.

C.

Rev. IN . PETERSFIELD . 1668.—HIS HALFE PENY.

43. A variety of B. 79, has on R. "HARTE . IN . PETERSFIELD."—

T. I.

PORTSMOUTH.

44. *Obv.* JOHN . AYLWARD.—A row of candles and dipping-box.

G.

Rev. IN . PORTSMOUTH.—I. M. A.

45. A variety of B. 88, reads on *Obv.* CHRISTEFER . BRYNEER.—

G.

A hall.

Rev. As in Boyne. The writer has both tokens.

46. *Obv.* ALEXANDER . CARTER.—Pair scales and wheatsheaf.
A. *Rev.* IN . PORTSMOUTH.—A. R. C.
47. A variety of B. 86, *Obv.* same as in Boyne. (Octagonal.)
G. *Rev.* is dated . 68 . and has R. A. P. under PENNY.
48. *Obv.* THO . IELLIT . AT . WHIT.—A hart couchant.
A. *Rev.* OF . PORTSMOUTH.—T. E. I.
49. *Obv.* JAMES . LOCK.—1667.
A. *Rev.* IN . PORTSMOUTH.—I. M. L.
50. *Obv.* THOMAS . PARKES.—A dolphin.
G. *Rev.* OF . PORTSMOUTH.—T. E. P.
51. A variety of B. 96 has the initials N. E. P. in the field on
S. each side, instead of N. S. P., and on *Rev.* is dated
 1666.

It is evident that Nicholas Peirson had married again,
 since he issued his former token in 1653.

52. *Obv.* PAUL . RICHARDS.—P. E. R.
A. *Rev.* IN . PORTSMOUTH.—1656.
53. *Obv.* WILLIAM . SMEDMORE . AT.—A fountain.
A. *Rev.* PORTSMOUTH . 1670.—HALF PENY.
54. *Obv.* RICHARD . THOMAS . ON . THE.—A stag couchant.
Rev. POINTE . OF . PORTSMOUTH.—R. I. T.
55. *Obv.* WALTER . THURMAN.—A roll of tobacco.
A. *Rev.* OF PORTSMOUTH . 60.—W. I. T.
56. *Obv.* ROBERT . TIPPETS . IN.—Barber Surgeons' Arms.
A. *Rev.* PORTSMOUTH . 1666.—R. E. T.

57. *Obv.* RICHARD . WHITE.—R. M. W.

Rev. OF . PORTSMOUTH.—1656.

This token was in the late Mr. Nesld's collection.

58. *Obv.* THOMAS . WILSON . AT . THE.—Plume of feathers.

Rev. VPON . YE . POINT . IN . PORTSMOUTH.—HIS HALFE
PENNY.

RINGWOOD.

59. *Obv.* THOMAS . BLANCH.—Rosa surmounted by crown.

Rev. IN . RINGWOOD.—T. B.

60. *Obv.* EDWARD . TANNER.—1668.

Rev. IN . RINGWOOD.—E. D. T.

Copied from MS. list in library of Num. Society.

61. *Obv.* TRISTRAM . TURGES . OF.—Arms in shield. The arms
G. are a chevron between 3 cross crosslets.

Rev. RINGWOOD . 1666.—T. G. T.

SOUTHAMPTON.

62. *Obv.* ANTHONY . BARROW.—The Grocers' Arms.
A.

Rev. IN . SOUTHAMPTON.—A. B.

63. *Obv.* RICHARD . CORNELLIVS . R. C. and 6 stars.
A.

Rev. IN . SOUTHAMPTON . 1660.—A barrel.

64. *Obv.* GEORGE . FREEMAN . AT . YE WHIT.—A horse ambling.
A.

Rev. IN . SOUTHAMPTON . 1668.—HIS HALFE PENY.

65. A variety of B. 117 (JOHN CUTER) has *Obv.* 3 stars . *Rev.*
A. 3 roses. Device described in Boyne on *Rev.* (detrited).

66. *Obv.* WILLIAM . IOLLIFE . OF.—The Grocers' Arms.
G.

Rev. OF . SOVTHAMPTON . 1666.—W. L. I.

It will be seen OF occurs on both sides.

67. *Obv.* WILLIAM . LOLLIFE . OF.—The Grocers' Arms.
A.

Rev. SOUTH . HAMPTON.—W. L.

It has been thought by some the two last tokens are by the same issuer, with the initial of surname altered by mistake.

68. *Obv.* IOSEPH . SMITH.—The Mercers' Arms.

Rev. IN . SOVTHAMPTON.—I. S.

TITCHFIELD.

69. *Obv.* WILLI . NOVOMTON.—The Grocers' Arms.

G.

Rev. OF . TICHFEILD . 1652.—W. H.

70. *Obv.* HENRY . RAY.—Pair of scissors open.

G.

Rev. OF . TICHFEILD.—H. E. R.

WHITCHURCH.

71. *Obv.* ALLEN . HARPER.—The Grocers' Arms.

Rev. IN . WHITTCHVRCH.—A. I. H.

WINCHESTER.

72. *Obv.* A | WINCHES | TER . FAR | THING | 1669. (In five
o. lines).

Rev. c. w. Each side the arms of the City in a shield.

This city farthing is much rarer than the halfpenny Boyne, No. 129, and does not appear in his list, although it is named in the proclamation. (See *ante*, p. 123.)

79. *Obv.* PETER . CROSS . 1667.—The Grocers' Arms.

A.

Rev. IN . WINTON . OROGER.—HIS HALFE PENNY.

74. *Obv.* ROBERT . MICHILL.—The Grocers' Arms.

B.

Rev. IN . WINCHESTER.—R.S.M.

A variety of B. 136 reads as follows :

75. *Obv.* WILLIAM . OVER . AT . YE.—W. M. O.

A.

Rev. (As Boyne).—The Grocers' Arms.

76. *Obv.* JOHN . PVRDONK . OF . WINTON.—Ironmongers' Arms.

Rev. HIS . HALFE . PENY . 1667.—I. P.

77. *Obv.* WILLIAM . TAYLER.—The Grocers' Arms.

C.

Rev. IN . WINCHESTER.—W. R. T.

This undated farthing was probably issued before W. T.'s halfpenny in 1667. (See B. No. 140.)

YARMOUTH (Isle of Wight).

78. *Obv.* JOHN . PRICE . YARMOTH.—St. George and dragon.

B.

Rev. ISLE . OF . WITE.—I. P.

No doubt by the same issuer as the $\frac{1}{2}$ d. of John Price in 1670. (See B. p. 105, No. 143.)

TRANSFERS.

There are two transfers from Boyne's Hants list which belong to other localities, viz. :—

"Will Adye," B. No. 48, belongs to *Wilts*, and is rightly described under Chippenham, p. 480, No. 23, in Boyne. This token is in the writer's possession.

"I. Cleaver," B. No. 118, belongs to London, and the correct description is in Boyne, at p. 310, No. 2,335.

Whilst the following must be transferred from *Herts to Hants*, see B. 112, No. 74, where it reads—

Obr. THOMAS . RAWLENOSON . AT . YE.—A hart lodged.

Rev. WT. HART . AT . HARTFORD . BRIDG.—HIS HALF PENNY.
T. E. R.

Mr. Boyne remarks, "This token should perhaps be assigned to *Hartford Bridge, Hampshire*," and in Daniel Paterson's "Book of Roads," London, 1776, we find that village (near Odiham) is on one of the coach-roads from London to Portsmouth. Another transfer from *Salop to Hants* is in the case of B. p. 386, No. 37, reading—

Obr. THOMAS . IVYNOE.—A pot of lilies.

O.
Rev. OP . NEWPORTE . 1654.—T. I.

This is in the author's collection, and was found near Newport, in the Isle of Wight.

A third transfer to Hampshire is from Norfolk (Boyne, p. 354, No. 245): "Will. Hide," who lived and died in Yarmouth, Isle of Wight. He was an alderman of that old borough, and there is a slab to his memory in the pavement of the parish church, dated March 8, 1679. This information I had from the late Mr. J. S. Smallfield, who died on April 27th, 1883, after a lingering illness.

H. S. GILL.

May 4th, 1883.

XII.

PAPAL MEDALS OF THE FIFTEENTH CENTURY.

MARTIN V. (COLONNA) 1417—31.

By those who have written on Papal medals hitherto the series has been shown to commence with those of Martin V. Du Molinet and Venuti say this,—that it begins about 1430, towards the close of that Pope's reign, and Du Molinet tells us that they were meant to serve a purpose like that which those coins of ancient Rome did that are known to us as consular, in commemorating some achievement of this or that Roman family.¹

In the absence of any medals, which with certainty can be considered contemporary, it might be questioned whether a description of Papal medals ought not to commence at a date later than this, even though we know that this Pope's features were modelled in wax by the great artist, Vittore Pisano, or Pisanollo, and that from his model there were executed cast medallions. Yet who amongst us has seen these? Do they exist?

Notwithstanding this, I am of opinion we shall do wisely, conforming to the lines laid down by previous writers, to take the medals of this pontiff first, and to determine, as best we can, those characteristics which probably do, or do not, associate them with his reign.

¹ "Historia Summorum Pontificum a Martino V. ad Innocentem X. per eorum Numismata." 1679. Præfatio. See also preface to Venuti, p. 10. "Numismata Romanorum Pontificum Præstantiora, a Martino V. ad Benedictum XIV." Per Rudolphinum Venuti Cortonensem. Romæ, MDCCXLIV.

Of course there are papal medals of much earlier popes than those of Martin V., yet no one doubts but that they are supposititious. "Sunt et alia" (says Venuti, in his Preface), "quæ Martini V. ætate antiquiora videntur, numismata; quippe duodecim ante Martinum Pontifices exhibent, et a Johanne XXI. (1276) primum incipiunt; sed reverà nullam redolent vetustatem."²

The election of Otto Colonna to the Papal chair, at the Council of Constance, disappointed the hope of religious minds which were looking for internal Church reforms, but outwardly it brought back unity to a considerable part of Christendom. With the inappreciative street-boys of Florence, who, when the new Pope tarried there on his journey Romewards, saucily bawled under his windows,

*Papa Martino
Non vale un quattrino,*

the election apparently did not count for much; but to the larger world outside, Pope Martin came to show such worth, that the fine bronze tomb in the Lateran basilica, erected after his death by the hand of Simone, the brother of Donatello,³ was inscribed with the great words, TEMPORVM . SVORVM . FELICITAS.⁴ Biographic notices must not be built on epitaphs; yet if this flattering inscription reads a little as though by it we were to be reminded of the Eternal City under the Antonines, we shall not forget that evidence remains to prove how Rome, and indeed Italy herself, stood in his debt,

² Venuti, *op. cit.*

³ Vasari, "Lives of the Painters," &c.

⁴ Leonardo of Arezzo, a contemporary, asserts that Colonna "undeceived the world by his extraordinary sagacity." Bower's "Lives of the Popes." London. 1766.

when Pope Martin died of apoplexy in 1431. His medals also tell it. What he was to Western Europe as Pope lies in the domain of ecclesiastical history, not in ours; but his persistent suppression on the Continent of that yearning for ecclesiastical reform which was breathing audibly there, and his treatment here of our Archbishop, Henry Chichele, will not commend his memory to many amongst ourselves.⁵

The medals which bear the name of this pontiff, as recorded by Venuti, are five in number.

1. *Obv.*—MARTINVS · V · COLVMNA · PONT · MAX. · Side-face of the Pope to right, bare-headed, wearing a kind of cape or cloak, called the "pluviale," which is richly ornamented with arabesque work.

Rev.—PONT · ANNO · PRIMO · MCDXVII. Arms of the Colonna with the Pontifical insignia, "a column crowned;" a crown was the addition to their arms, when Stephen Colonna acquired the privilege of placing the crown on the head of an emperor at his coronation. Beneath, ROMA. Size 12, according to the scale of Mionnet.⁶

This type, with the Pope's head projecting from the stiff collar of the "pluviale" (somewhat as the head of a tortoise projects from its shell) is interesting, by its connection with the original type, known to have been executed by Vittoro Pisano of Verona.⁷ It was indeed Pope

⁵ Archbishop of Canterbury, 1414—48. He was charged with encroachment on the prerogatives of the Papacy, by having accorded indulgences to pilgrims at Canterbury, resembling those obtainable at Rome during a jubilee.

⁶ In this paper the scale adopted by Venuti has been translated into that of Mionnet, wherever it has been possible to describe size.

⁷ See Pisano's portrait on a contemporary medal. "Guide to Italian Medals," British Museum, Pl. II. 15.

Martin's own journey through Florence which brought that great artist to Rome. In a letter of Monsignor Giovio to Cosimo de Medici,⁸ quoted in the "Lives of the Painters," that writer, speaking of Pisano, says, "There are many highly-esteemed medals of great princes by his hand, . . . I have besides a medal with the portrait of Pope Martin, bearing the arms of the house of Colonna on the reverse." It may be doubted whether that medal of Vittoro Pisano's is now known. Its restored form, which is common enough, is attributed by Venuti to Ferdinand Saint Urhain, who worked under the patronage of Francis Cardinal Barberini, in the seventeenth century, and it is probably a fair restoration, presenting us with some likeness of the Pope.

2. *Obv.*—MARTINVS · V · COLVMNA · PONT · MAX. The bust of the Pope to right, with triple crown, and "pluviale."

Rev.—QVEM · CREANT · ADORANT. The Pope enthroned, crowned by two Cardinals, others seated. A Swiss guardsman kneeling. In the exergue, ROMÆ.

I venture to suspect that the "triregno," or triple crown, upon a medal claiming to be of this reign is itself indicative of late workmanship, and suspicion is confirmed when we regard the reverse.⁹

Its legend points to one mode of election at a Papal

⁸ Paulo Giovio. 1468—1552.

⁹ Lorenzo Ghiberti, the goldsmith, celebrated as the founder of the bronze gates at Florence, made for Martin V. "*a wonderfully rich mitre, formed of foliage in gold, the leaves being wholly detached from the surface, and of very beautiful effect.*" Vasari also tells us, in the life of Ghiberti, how he made a mitre of gold for Eugenius IV.

conclave in aftertimes, when all others had failed. After long waiting, the little shout—the spontaneous expression of a sudden unanimity in choice, the rush forward, the act of prostration, seemed to some an answer to prayers, the direct *afflatus* of the Holy Spirit; and an election so carried was termed an election by “inspiration,” or “acclamation,” or “adoration.” To others, men hardened in conclava procedure, it seemed, I suppose, rather the way in which an election had been carried by a *coup de main*, the result of skilful electioneering among cardinals, jaded by repeated acts of unsuccessful voting. Further, the kneeling Swiss guard here introduced must not be overlooked, for his appearance at once disposes of the medal’s claim to be contemporary with Martin V.; that famous body-guard was not constituted until the reign of Julius II. 1503—13.

8. *Obv.*—MARTINVS · V · COLVMNA · PONT · MAX. Bust of the Pope, similar to No. 1, but to left.

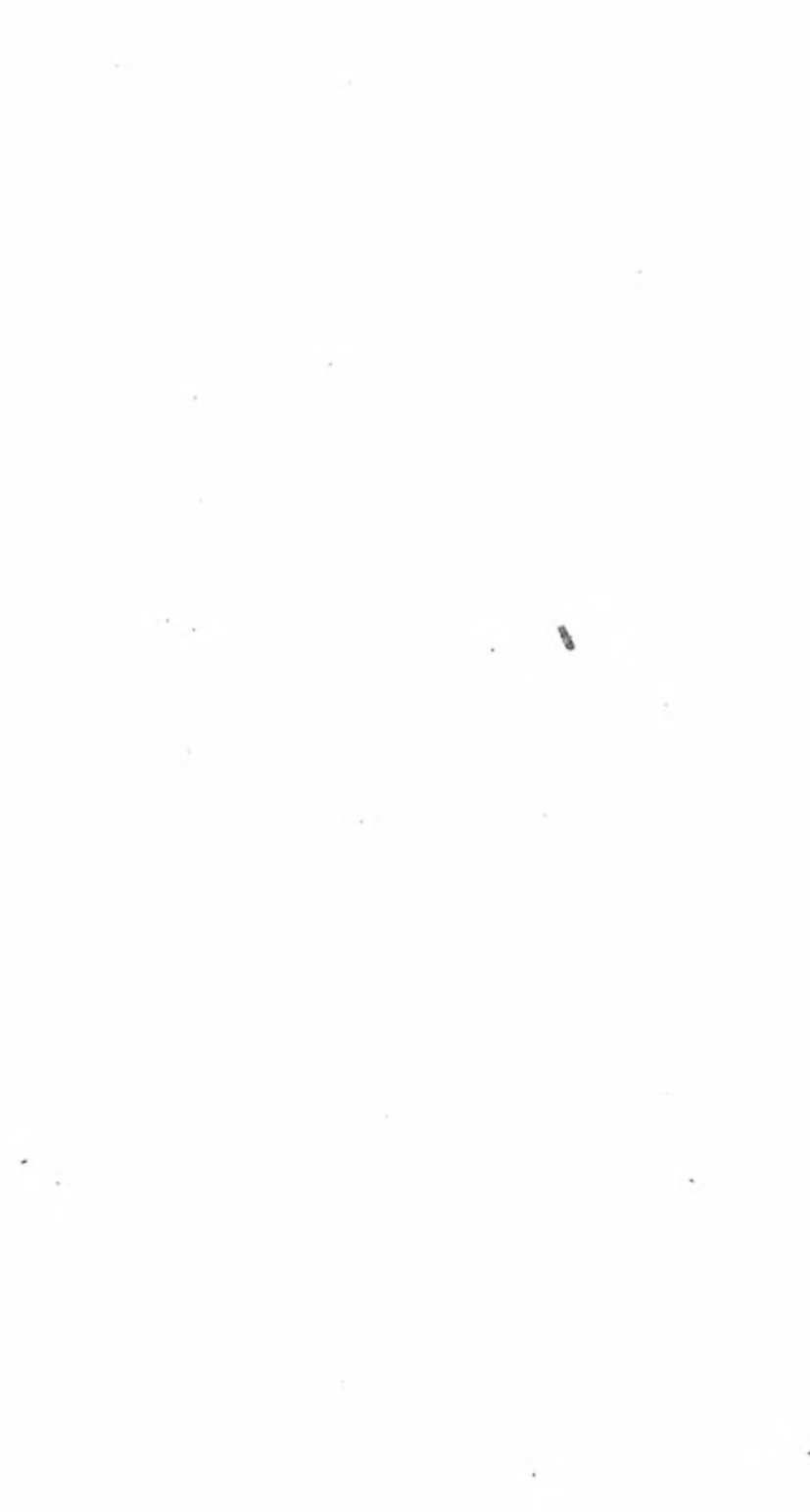
Rev.—OPTIMO PONTIFICI. In the exergue, ROMA. Female figura (Rome), armed, seated on a trophy, holding in her left hand a cornucopia, and an olive branch; in her right hand, a balance. Size 12.¹⁰

This medal is attributed (with a “perhaps”) to Pisanello, by Venuti; the reverse is wholly after the manner of ancient Roma, as exhibited on the imperial coins of Nero and others. Its idea of Rome, the capital, grateful to her Prince for the restoration of peaceable times, may be illustrated by our taking the words (quoted by Venuti) of a contemporary diarist, who says, “Rempublicam quietam, et tranquillam reddidit, adeo ut quisque securus

¹⁰ See “Guide to Italian Medals in the British Museum.” Papal series, p. 79. C. F. Keary, M.A., F.S.A.



PAPAL MEDALS.



diuque noctuque aurum in manibus forre possot ad CC. ab urbe lapidom; fuitque de Romanâ Urbe multum heno meritus."—*Paul Benedict Nicolai*.

4. *Obv.*—Side-fsco of the Pope, bare-headed; exactly like No. 1.

Rev.—DIRVTAS · AC · LABANTES · VRBIS · RESTAVR · ECCLES. Front of a church with portico. Underneath, COLVMNÆ · HVIVS · FIRMA · PETRA. (Of this column (Colonna) the stone is firm.) Size 12.

This medal, at first a cast, is a restoration in the form in which it is known to us.

The façade of the church here represented is that of the ancient basilica of St. Peter's. To illustrate this legend ["The churches of the city, ruined and ruinous, he restored"], the following words of Platina¹¹ are quoted by Venuti with effect:—

"Martinus autem ab externo hoste quietus sd exornaudam pstriam, bssilicasque Romanas animum adjiciens, Porticum S. Petri jam collabentem, restituit," &c.

So much was done by him in rebuilding, that he gained for himself the name "Romulus the Second."

The legend in the exergue plays on the Pope's family name Colonna, a name said to have been assumed when the first Colonna transported from Palestine to Italy the very column to which, as people believed, our Blessed Lord was tied for the scourging.¹² The stability of Martin V.'s work with the instability of that which he restored,

¹¹ Battista or Bartolomeo Sacchi, Secretary of the Datary, was the writer of "Lives of the Popes," from S. Peter to Paul II. He lived in the fifteenth century.

¹² Buonanni questions this tradition.

wss meant by the words of the legend to appear in contrsst. The first mention of the Colonnas occurs in the middle of the eleventh century. How they were common troublers of the city's peace, by their constant feuds with the Popes and the Orsini, will be recollected by those who have read nothing more about them than "Rienzi, the Last of the Tribunes." Their palace, which stands in a street leading out of the Corso, near the Foro Trajano, and is now the residence of the French Embassy, was begun by Pope Martin V.

5. *Obv.*—MARTINVS · V · COLVMNA · PONT · MAX. Bust of the Pope, as on the obverse of others.

Rev.—IVSTI · INTRABVNT · PER · EAM. A door, over which is the head of the Saviour, and on either side a candle. An allusion to S. John x. 9. Size 12.¹³

Originally cast (according to Venuti), the only example of this medal which I have seen was much later than the fifteenth century; it had been struck from a die.

EUGENIUS IV. 1431—47.

The successor of Martin in the Papal Chair was Gabriel Condulmieri, a Venetian. Elected March 2, 1431, at the age of forty-eight, he assumed the government under the name Eugenius IV. His pontificate was troubled and unsuccessful, and its troubles soon began; first of all with

¹³ A confraternity at Rome, called "The Society of the Most Holy Saviour," had, as their emblem, the device of this reverse. Peter Colonna (created Cardinal by Pope Nicolas IV., 1287, A.D.) had been the reconstitutor of this Society, and it was to his memory, quite as much as in the Pope's honour, that this medal owed its production.

the Colonnas, and then with the Council which was assembled at Basle in the year of his election. Two points, above all others, were to occupy the fathers there: one was the much-desired union of the Greek and Latin Churches; the other was a reformation within the Church "of its head and of its members." As regards the first, the Pope was certainly in earnest; the Council was serious as regards both. Its earlier decisions seem to have been acquiesced in by the Pope patiently, but not willingly, only through a dread of further schism; his patience, however, gave way when the citation was sent him, the Pope, to appear before the Council in person! He decreed its dissolution, it declined to dissolve; he then convoked its assembling nearer Rome, first at Ferrara, then at Florence. This was in 1438. To Florence accordingly the Pope went, and thither went also many more; but a recalcitrant minority stayed behind, enacting decrees and eventually going through the form of deposition, to elect another in his stead.¹⁴ Thus Europe again saw rival popes, and was distracted in its choice between rival Councils.

Meanwhile that larger half of the split-up Basle Council met at Ferrara, under the presidency of Eugenius; its first meeting was composed in spirit by the gratifying appearance there of the Greek Emperor, John VIII., Palæologus,¹⁵ of Joseph, the Patriarch of Constantinople, and of a host of others—bishops and doctors of the Orthodox

¹⁴ This audacious act offended so greatly the King of England, Henry VI., that, in writing to them on the occasion, he addressed the Council as the "congregation of Basil."

¹⁵ See his portrait on a medal of Vittore Pisano, "Guide to Italian Medals." British Museum, Pl. II. 7. It is also found in the South Kensington Museum collection.

Church. Reconciliation between the long-divided East and West now apparently rose to view, terms of union seemed actually found, so that Greek and Armenian were again to be folded within the Roman pale. A Papal bull, "*Sancti Spiritus*," which is lying at this day in the public archives of Bologna, was issued by the Roman Pontiff at Florence, July 6, 1439, his own joyous presage of a coming unity. Eugenius was mistaken. It was terror only which had been driving men together, terror inspired by the aggressive forces of the Turk. In 1442, when the Synod of Florence was dissolved, there had dissolved also this beautiful mirage; not only had Eugenius lived to see the Western Church again divided, but the great Church of the East again had fallen apart. No wonder if men in Rome saw their master grave and melancholy; or that, when death was not far distant, he was heard addressing himself by name, "O Gabriel, how had it profited thee, to have been neither pope, cardinal, nor bishop, ending thy days, as thou didst begin them, following in peace thy monastic rule!" He died February 23, 1447, and lies buried in the Vatican church, by the side of his predecessor of the twelfth century.

Among the few medals of this Pope there is one in particular which possesses great historical interest, the medal which was produced to commemorate the Synod at Florence.¹⁶ It is figured in the "*Trésor de Numismatique*" (Paris, 1839), Pl. I. No. 4;¹⁷ and in *Veuuti* (p. 7) it is described thus:—

¹⁶ On the bronze doors of the central entrance of St. Peter's is a kneeling figure of Pope Eugenius, and also a bas-relief of the Synod at Florence. Vasari reflects strongly on the employment by the Pope of inferior artists in the execution of this work.

¹⁷ There is an engraving of it also in Buonanni, "*Numismata Pontificum Romanorum*," p. 20; also, in Du Molinet, p. 8.

1. *Obv.*—SVB EVGENIO · PAPA · IIII · ANNO · XPI · MCCCCXLI · VNITI · SVNT. The Pope seated, vested, in the act of blessing, his left hand holding the Keye. On either side, a small coat-of-arms, in one are the Keys, in the other the Condulmieri arme.

Rev.—GRAECI · ARMENI · IN · SYNODO · FLORENTINA · CVM · SEDE · APOSTOLICA. A crowned figure, with hands clasped, on his knees. On his right, another figure likewise kneeling. In the upper part the head of St. Peter, among clouds. Size 8, and also size 14.

Of this medal, this "pulcherrimum numisma," as Venuti calls it, there is in the collection of medals at Florence,¹⁸ a cast, in gold. The crowned kneeling figure of course is John Palæologus, the Emperor; the other kneeling figure Venuti conjectures to be the Armenian Nuncio; the legends, obverse and reverse, must be taken together. Whether it be the work of Vittore Pisano or not, shall be decided by others; it is perhaps enough to say the fact is questioned.

2. *Obv.*—EVGENIVS · IIII · PONT · MAX. Bust of the Pope to left, wearing the triple crown, and "pluviale."

Rev.—Arme of the Condulmieri family, on a shield, *azure*, a bend, *argent*; above, the Pontifical insignia. Size 12.

This medal is evidently of late workmanship. It looks like one of Paladino's restorations, and is so noted by M. Armand.

3. *Obv.*—EVGENIVS · IIII · PONT · MAX. Bust of the Pope, as represented on the preceding medal.

¹⁸ This collection, in the Galeria Imperiale, was formed originally by the care of Mr. Fitton, a priest, who left England during the Protectorate. He was considered to be highly accomplished in various branches of Archæology.

Rev.—QVEM · CREANT · ADORANT. In the exergue, ROMÆ. This reverse resembles that of No. 2 of Martin V. in all particulars save size, for of this we have sizes 12 and 14.

That which was said of this type before, applies here just as much.

4. *Obv.*—EVGENIVS · III · PONT · MAX. Bust of the Pope to left, like No. 2.

Rev.—NICOLAI · TOLENTINATIS · SANCTITAS ·
CELEBRIS · REDDITVR. In the exergue, SIC ·
TRIVMPHANT · ELECTI.

The Pontiff, before an altar, surrounded by cardinals, inscribes the name Nicolas "*inter Sanctos*," decreeing his canonization. At Tolentino, a town south-west of Ancona, there lived and died this Nicolas, whose canonization occurred at Whitsuntide, June, 1446.¹⁹

NICOLAUS V. (LUGANO, OR PARENTACELLI). 1447—55.

This title had been assumed by one of the anti-popes in the preceding century. Corbario, a puppet of the Emperor Lewis of Bavaria, was set up, in 1328, to oppose John XXII.; but having subsequently surrendered his position and his person to John, Corbario died a prisoner at Avignon, in 1333; so that his name need not lead us to

¹⁹ This medal is obviously late in date, but it has appreciable affinity with the reign of Eugenius; not so, however, is it with two others, bearing his head, "EVGENIVS · PP · QVARTVS," and "REDDE · CVIQVE · SVVM." These, with another of the same kind, of Pope Martin's, "SIC · OMNIS · MVNDI · GLORIA," I have excluded from our list, as having no more to do with those reigns, than the Lady Godiva on a Coventry token of this century has to do with the time of that ancient story.

confound him with the subject of this notice. There used to be in Rome a saying²⁰ that, "he who goes into conclave *a pope*, comes out a cardinal;" so surely was common expectation apt to be disappointed! Thus it was now; everybody expected the election of Prospero Colonna, a nephew of Martin V., but at last, to everybody's surprise, the choice of the electors fell on Thomas, Cardinal of Bologna; and, as all have agreed, a better choice could not have been made. By prudence and judgment, above all by a spirit of conciliation, he found means, on his accession, to stem the tide which was flooding Italy and the Western Church with disasters. How was he to deal with that excommunicated self-asserting remainder of the Basle Council, as well as with him, who, by its authority, was claiming spiritual allegiance under the name Felix V.? The attitude of certain European princes in part solved this problem. Felix was soon induced to renounce a position which he had held for nearly nine years, but which he had never coveted; and on renouncing it, he was permitted to retain some of the pontifical insignia; he was created Cardinal, Dean of the Sacred College, and Perpetual Legate in Savoy. Next, those ecclesiastical censures fulminated against the Basle Council by Eugenius were by Nicolaus removed; nay, its very Acts were confirmed, and its dissentient members restored to their several benefices.²¹ But if Pope Nicolaus by these and similar measures thus appeared on one side of Europe as the pacificator, on the other he played magnificently the part of a second Mæcenæ. During his pontificate

²⁰ Quoted in his book on "Papal Conclaves," by Mr. T. Adolphus Trollope, p. 141.

²¹ Artaud, "Histoire des Souverains Pontifes Romains," vol. iii. p. 299. Paris, 1847.

Constantinople fell into the hands of the Turk, and the Empiro of the East collapsed (1453); the collapse created changes in the West which amounted to little less than a literary revolution. A host of scholars, fleeing from Mahomet II., their hands laden with precious manuscripts, coming to Rome, were received by Nicolaus with a splendid hospitality. In Italy, this was to quicken learning with a new life, so that Greek classics translated got access anew to Latin minds—to the minds of some whose fathers, not so long before, had regarded Petrarch as miscreant, when he read their own Virgil. Nor is this all; not only did Nicolaus become the founder of universities at Glasgow, Treves, and Barcelona, but the grand library of Rome was his creation. There he used his opportunity so well, that before his death the Vatican could boast the possession of nine thousand manuscripts; while of that learning brought to life again, which made illustrious the reign of Leo X., it may be said the seeds were now being sown broadcast. But Art, in his day, not less than Learning, felt the warmth of a fostering hand. It was by his invitation the great painter, Fra Angelico, settled in Rome; as it was by his lips the artist's epitaph was believed to have been dictated.²¹ In public buildings at Civita Castellana, at Narni and Spoleto, Rosselino was continuously enjoying his patronage; while within the capital itself, his plans for the reconstruction of the Vatican laboured only under one difficulty, but that was irremediable; the scale of them was such as to demand, not the foot-rule of the architect, but the wand of the enchanter.²²

The death of this eminent Pontiff occurred March, 1455,

²¹ Vasari, pp. 28, 36.

²² Ibid. p. 182.

and in the Vatican Basilica he lies hurried. It remains for us to catalogue the medals which bear his name.

1. *Obv.*—NICOLAVS · V · PONT · MAX. Bust of the Pope to left, wearing the triple crown; his "pluviale" rich in arabesque work.

Rev.—Arms of Nicolaus V.—*or*, two Keys cross-wise; above, the Pontifical insignia. Size 12.

A variety is described in Venuti, on which a wreath of laurel encircles these arms. Both these medals are of late work.

A question has been raised, Was his family entitled to bear arms at all? Vasari, speaking of his buildings at the Vatican, says: "The little that was done may be known by his arms, *or what he used as arms*, which were two keys laid cross-wise, on a field of red." His father was an apothecary, and his mother, Andreola di Calandrini, eked out the apothecary's income by rearing poultry.²⁴ The story is told of her one day presenting herself at the Vatican, after her son's exaltation, attired as a pope's mother, according to her imagining, ought to be. The son, otherwise minded, declined to receive her, saying to his chaplain, "he well remembered his dear mother, who was a plain and decent body, and whom he would fain see again, but he had no desire to speak with the magnificent lady who had just entered the room."²⁵ The evidence of Æneas Piccolomini (afterwards Pius II.) would show that Nicolaus was of noble birth, a Parentacelli of Sarzana.

²⁴ Artaud, vol. iii. p. 301.

²⁵ "Papal Conclaves," p. 144.

2. *Obv.*—NICOLAVS · V · PONT · MAX. The head and bust of the Pope, as on the preceding.

Rev.—TOMAS · LVGANO · DI · SARZANA · MCDIHL.
The Pope's arms on the Pontifical insignia, the Keys and triple crown. Size 12.

This medal names the Pope's birthplace, Sarzana; it lies on the road between Spezzia and Carrara. Within the simple yet grand *façade* of the Duomo there has been erected a statue of Pope Nicolaus.

On these three medals the effigy of the Pope is identically the same, and that which Venuti says of this, "*posteris temporibus cūsum*," may be said of the others likewise; but if we may not presume that we see on them a contemporary portrait, is it presumption to suppose we have in these effigies faithful copies of one? The men were there to portray his features, and they did portray them.²⁶ Have we no likeness of the man? A picture drawn by word of mouth,²⁷ describing his personal appearance, makes him "small in stature, with black eyes and large mouth, his voice strong and sonorous;" coupling with this description what Vasari says of his disposition, "a great and determined spirit, well informed also, thoroughly skilled in such undertakings, he directed and governed the architects, no less than he

²⁶ Vasari, "Fra Giovanni da Fiesols."

²⁷ Artand, vol. iii. p. 812.

²⁸ Attavante, the contemporary of Fra Angelico, a renowned miniature painter, illustrated with elaborate drawing a copy of "*Silius Italicus*." "It is now," writes Vasari, "at San Giovanni e Paolo, in Venice;" and proceeding to describe the paintings minutely, he adds, "on another page is the portrait of Pope Nicolaus V., taken from the life. He is drawn *in profile without beard*, and is looking towards the commencement of the book, which is opposite to him, and towards which he extends his right hand, as if in admiration of it."

was counselled and guided by them," and a good deal of the man's portrait seems set before us.

3. *Obv.*—NICOLAVS · V · PONT · MAX. Bust of the Pope, as on the preceding medals.

Rev.—FELIX · ROMA. The city, surrounded by walls. Size 12.

I have not seen this medal, but Venuti (page 11) says it represents the Rome which Nicolaus beautified and remade; "not only did he render it more safe with walls rebuilt, but by the enlargement of the Vatican, and the restoration of many churches, he adorned it." Four lines, taken from the Latin verses which survivors placed on his sarcophagus, sum up so well the causes which constituted Rome a "Felix Roma" in his day, that I am tempted to quote them here.

"Consilio illustris, virtute illustrior omni,
Excoluit doctos doctior ipse viros;
Abstulit errorem, quo Schisma infecerat Urbem,
Restituit mores, mœnia, templa, domos."

4. *Obv.*—NICOLAVS · V · PONT · MAX. Bust of the Pope, as on the preceding medals.

Rev.—ANNO · IVBIL · MCDL · ALMA · ROMA. The holy door, closed. 1450. Size 12.

5. *Obv.*—NICOLAVS · V · PONT · MAX. Bust of the Pope, as before.

Rev.—RESERAVIT · ET · OLAVSIT · ANNO · IVBIL · MCDL. The Pope closing the holy door, attended by his cardinals. 1450. Size 12.

These two medals are supposititious, the points which divide the words serve to characterize the work, and class them, but the subject chosen for the reverses determines their date as false.

The ceremony commemorated thus unhistorically was

not instituted until the commencement of the following century. Number 4 is figured in the "Trésor de Numismatiquo" (*Médailles des Papes*), and appears with the date 1450 in relief in the exergue. The other also is so dated, but in this case the date has been punched in, the figures produced by the punch (retrograde) are, like the last, comparatively early in form, but the general workmanship of both medals is far from early. False speaking as the medals are, the jubilee which they both commemorate is historical, for unhappily its occurrence was signalized by an accident, through the crowding of the populace and the pilgrims on the bridge of St. Angelo, by which nearly two hundred people lost their lives. The booths and shops which had narrowed the roadway of the bridge, and thus occasioned the accident, were by the Pope's orders subsequently removed.²⁹

There are two descriptions of the next medal. One, that of Venuti, who simply says, after giving the legend, NICOLAVS . V . PONT . MAX, "Effigies, ut in præcedentibus." For a medal which is regarded as contemporary, Venuti's "*ut in præcedentibus*" is not a satisfactory description of the obverse. This is his reverse.

Rev.—SED . (for sedit) AN . VIII . DI . XX . OB . XXV .
MAR . MCDLV ; and, completing the legend (in
the lower part of the medal), ANDREAS .
GVACALOTIS. [Size 12].

The other is that which Mr. Keary gives in his "Guide to the Italian Medals in the British Museum," p. 79, with some little alteration.

²⁹ This bridge, which appears on medals of later Popes, is the Pons Ælius, first constructed by the Emperor Hadrian, as an approach to his mausoleum.

This medal was cast, shortly after the Pope's death, by Andreas Guacalotis, whose name it bears, to show the esteem with which Nicolaus's successful reign was regarded.

6. *Obv.*—Bust l. in papal robes, hare-headed. + NIOO-LAVS · PPA· QVINTVS; and below, ·TOMAS·.³⁰

Rev.—SEDI ANNO OCTO DI XX OBIT XXV MAR MCCCCLIII. The Pontiff in a boat, the mast of which is a cross, from it hangs as the sail a banner, on which the Ksys, crosswise, are seen displayed; at the stern is a "ciborium" of ancient form. With one hand the Pope supports the cross, with the other he holds an oar by which he steers. Upon the side of the boat is the significant word ECLESIA. Below, ANDREAS · GVAOALOTIS. Bronze, 2·9. Figured in Venuti, p. 10, and also in the "Trésor de Numismatiques." [Méd. d'Italie, 1 partie, Pl. XVII. No. 1.]

Venuti has raised the question in his Preface, as to whether Guacalotis was the medallist, or, perhaps, rather the commissioner for medallists' work.³¹ He inclined to think the last, and the opinion was adopted by Cicognara. This question, however, has been decided by Dr. Friedländer against Venuti's conjecture; he identifies Guacalotis, or Guazzolotti, with Andreas del Prato, and assigns to him the date 1435—1495.³²

Venuti makes this remark upon the medal, "Licet non affabre factum, ob raritatem tamen est in pretio." In Mr. Thomas's sale, July, 1844, Lot 2,114 contained one; and another, cast in lead, was sold May 10, 1883, among the medals of Sir W. F. Douglas, P.R.S.A.

³⁰ Guazzalotti's use of two forms of the letter A, in this obverse, ought not to be overlooked; one is like V reversed. See Dr. Friedländer's remarks on this peculiarity.

³¹ Venuti's words are, "Suspiciari licet, ideo Guazzolotti nomen numismatibus impressum legi, quod numismatam negotio præfuerit, non quod reverà confecerit. Curam ergo adhibuit, non etiam manum apposuit. Prefatio, p. 18.

³² "Italian Medals of the Fifteenth Century." Berlin, 1882.


CALIXTUS III. (ALPHONSUS BORGIA). .

1455—58.

An aged Spaniard, seventy-seven years old, stepped into the place made vacant by the death of Nicolaus. Born at Valentia of a noble family, he had filled satisfactorily various important offices. At first, Canon of Lerida, and secretary to Alphonsus,³³ King of Arragou, then, Bishop of his native city and Cardinal, Borgia was elected to the popedom, April, 1455, under the title, Calixtus III. If by no one else, his election seems to have been expected by himself; some years before it occurred, he appears to have predicted with confidence that he should one day become Pope! The person whose election had been expected by others was an ecclesiastic of a nobler sort, Bessarion, the theologian, Greek Archbishop of Nicæa, and titular Patriarch of Constantinople. Greek though he was, his efforts to bring about union betwixt East and West had induced Eugenius IV. to include him in the Sacred College; and now, but for one malcontent cardinal, he would have become Pope. In public life, however, "*alicui invidiam conflare*" is only too easy, and the cry, "Shall we give a Greek, to be head over the Latin Church?" was raised against him in conclave successfully by Alain de Cerif, Archbishop of Avignon. Thus Bessarion lost his chance, and thus Borgia was summoned to preside over the Latin Church, when he had little left in him to give her. A learned canonist, we are

³³ The portrait of this king appears in the "Intrepidus Venator" medal of Vittore Pisano. "Guide to Italian Medals, British Museum," No. 1. Pl. I. An example of it occurs in the South Kensington Museum collection.

told that he would continue after he became Pope to cite his cases, in conversation, as though he were still professor in the law courts. By M. Artaud [vol. iii. p. 319] he is credited with "firmness of character;" to prove it he has taken that answer of Calixtus to his former master, Alphonsus, "the Magnificent," when the King, through his ambassador, was demanding the terms on which his old secretary would live with him: "Let him rule his kingdom, and leave me to rule the Church."³⁴ I cannot think M. Artaud happy in his illustration. But then, was not Calixtus zealous for religion? Unmistakably,—he turned to chase the Turk back across the Bosphorus; yet zeal for religion is not identical with zeal in religion, and the old man's heart beat quite as strongly with another passion, an ambitious wish to uplift the Borgias. His short reign of three years and a quarter sufficed to give three of them undeserved preferment. Calixtus died in 1458; his body, at first interred in St. Peter's, was removed to Spain, the country of his birth, early in the seventeenth century.

1. Obr.— CALISTVS PAPA TERTIVS. Bust of the Pope, with mitre, to the left.

Rev.—"Lion's head," ALFONSVS BORGIA GLORIA HISPANIE. Arms of the Borgia family; "or, an ox, passant;" above, the tiara, and Keys crosswise. This medal is in the British Museum; an example also occurs at South Kensington. It is attributed by Dr. Friedländer and M. Armand to Guazzalotti, and in confirmation of this attribution it is well to observe how one mark, found on the obverse, the rose, connects this medal with another

³⁴ Of course there are some who defend Calixtus in his treatment of the king; there are others who hold it formed part of his plan to detach Naples from Aragon, and secure it for his nephew, Peter Borgia.

of Guazzalotti's, struck after Pius II.'s death; and how another, the lion's head on the reverse, connects it with the work of the same medallist on No. 6, Pl. XXIV. of Dr. Friedländer's work, a medal of ALFONSVS · FERD · DVX · CALABRIE. There the lion's head is opposed to a wolf's—and one is taken by Dr. Friedländer to symbolize the Turk, the other that Christian Prince.

We have here a peculiarity observable which belongs to this period of the fifteenth century alone. The Pope's baptismal name appears on one side, and the name assumed by him at his election, on the other. Venuti describes, and indeed figures this medal, p. 16, as it is known to us in the recent type. I question whether he can have seen Guazzalotti's work.

2. *Obv.*—CALIXTVS · III · PONT · MAX. Bust of the Pope to left, wearing a mitre, as on the types of later date.

Rev.—HOC · VOVI · DEO; in the exergue, VT · FIDEI · HOSTES · PERDEREM · ELEXIT · ME.

Thirteen galleys, eight of which carry on their standards the Cross, the remainder a Crescent. Two of the Turkish galleys are in distress. Upon one, the most distant of those is the Christian squadron, the letters G. P. (G. Paladino) take the place of two of its "eyes," through which the oars passed. Size 12.

This reverse, struck a century after the time of Calixtus, by the medallist G. Paladino, refers to a vow said to have been made by him before his election.³⁵ The galleys which he built, sixteen in number, were dispatched from Ostia under Louis Scaramfa, Patriarch of Aquileia,³⁶ to unite with the forces of the Christians; they assisted in

³⁵ This device is also used on a medal of Pope Pius V., 1566 A.D.

³⁶ See a medal in the South Kensington Museum, giving Scaramfa's portrait.

rescuing Mitylene from the Turks, and restoring it to its prince.

3. *Obv.*—CALIXTVS · III · PONT · MAX. Bust of the Pope, as on preceding types.

Rev.—NE · MVLTORVM · SVBRVATVR · SECVRITAS ·
View of a city strongly fortified ; in the space between two bastions, the Papal arms. Above the ramparts, on one of the houses within the walls, may be detected the initials G. P. (G. Paladino, the medallist). Size 12.

Venuti was evidently puzzled to account for this reverse, because no record remains of Pope Calixtus having spent a single baioccho on fortifications. Signed with the initials of Paladino, the medal is later than the time of Calixtus by at least a century. I regard it as expressing conventionally the Pope's readiness to protect the common faith, as the other expresses his readiness to attack the common foe. Of Paladino, the medallist, I hope to say something later on.

4. *Obv.*—CALIXTVS · III · PONT · MAX. Bust of the Pope, as on the preceding types.

Rev.—CLAVES · REGNI · CAELORVM. The Papal keys, crowned. Size 12.

This reverse is altogether out of place here ; the legend belongs rather to the succeeding century, when it begins with Julius III. (1550), and is carried on in medals of succeeding popes. In my opinion, the medal itself may be classed with another, which Buonanni ascribes to Calixtus, but which Venuti's better judgment led him to regard as spurious. "OMNES · REGES · SERVIENT · EI" is its legend, and a cross surmounted by the pontifical tiara is the device. In Venuti's preface, Buonanni's book is praised, but with this qualification, "genuina omittit ; spuria pro genuinis adoptat." (p. xi.i.)

PIUS II. (*ÆNEAS SYLVIUS PICCOLOMINI*) 1458—64.

In the conclave held after the death of Calixtus, "there were some cardinals, who hunted the papacy for themselves or their friends; as there were some who, without any sense of shame, made speeches, pointing out their own fitness for it."³⁷

Not such as these was the Cardinal of Sienna. All but silent, his silence was more effective than their speech. He said quietly, "It is God that appoints, not man." In vain did the Cardinal of Rouen, a man of profligate character, assail him by name: "How can you want this *Æneas*? Would you elect a gouty old man, as poor as Joh? Shall we place a poet in the Chair of St. Peter?" When, however, it came to the vote, a majority voted in his favour, a majority which afterwards, "by accession," obtained the requisite number; thus the election of *Æneas Sylvius Piccolomini* was confirmed, and his coronation followed, September 3rd, 1458. He had sprung from a noble family at Sienna, having been born in Corsignano (1405). Nobility was its chief possession, for such was the poverty of his parents that when the youthful *Æneas* left home to take service abroad, the portion of goods which fell to him was a meagre half-dozen crowns, the value of a mule his father had to sell. Strange to say, his fortune led the future pope into the service of an anti-pope, by his becoming secretary to that Amadeus, Duke of Savoy, of whom we have read as Felix V. Passing on, the secretary rose higher, he came to be the confidential

³⁷ "Papal Conclaves," p. 145. This is the account of a contemporary,—the Chronicler of the Conclave.

agent and ambassador of Frederick IV.,³⁸ the Emperor. Rewarded abundantly with marks of the imperial favour, at length he found himself ambassador to the Papal court, and being at Rome, he had the wit to make his peace there. Having thus changed sides, employment sought him quickly, honours followed employment; in due time he was made bishop by Nicolaus, and cardinal by Calixtus. Last of all, Rome saw her "accomplished statesman" in the highest place of all, and gladly, for it was an election which promised to Rome a revival of her waning authority; indeed, it stood well outside the Curia, because in addition to distinguished power as a diplomatist, his varied learning and his lively writing had bespoken for Piccolomini high place in the republic of letters. In part these promises were fulfilled, for Pius II., as Pope, certainly held his own. And yet, if his reign may read pleasantly in contrast with others of that period, no one would speak of it as a success; and in part it was a failure. The council at Mantus, convoked as a goad to stimulate feeling against the Mussulman, was barren in results; no one except the Duke of Burgundy made a genuine offer of assistance. Then, too, by his politic change of side in the strife between Pope and Council, there was loss as well as gain. True, Æneas Sylvius Piccolomini had become Supreme Pontiff, but it was—at a cost. The world good-naturedly tolerates in us radical changes of opinion. You may attack vigorously to-day that which once you brilliantly defended, but men must not observe that you profit by the change. This, in his case, they did observe. The corner his conscience had turned was a sharp one, and

³⁸ Frederick IV. (the Peaceful), son of Ernest, Count of Styrmak; elected 1440.

if, in turning it, there appeared to others what looked like a moral upset, need we wonder if Pope Pius II. has not escaped the lash of the historian? ³⁹ It has been truly said, "No man ever laboured more than Æneas Piccolomini to restrain the power of the Pope within the boundary of the canons, and no Pope ever strove more to extend that power beyond all bounds."

Death overtook him in August, 1464, when he had journeyed to Ancona, that he might head the flotilla fitting out for a new crusade. His obsequious physicians were too cheerful about the case, and so provoked him to exclaim, "It is one of the miseries of princes to be surrounded by flatterers, even in the hour of death." His body, removed to Rome, and buried at St. Peter's, some years afterwards was placed where it now lies, over one of the side doors of the church of S. Andrea della Valle, in a sepulchre designed by Pasquino di Montepulciano, on which is sculptured, "His portrait taken from nature" (*Vasari*).

We come now to his medals, and in two of them we again touch solid ground, as regards authenticity in workmanship.

³⁹ Mosheim's "Ecclesiastical History," vol. iii. p. 428. And of him Mr. Hallam said, "Pius II. was a lively writer and skilful intriguer. Long experience had given him a considerable insight into European politics, and his views are usually clear and sensible. Though not so learned as some popes, he knew much better what was going forward in his own time." He also styles him "a wary statesman," "an accomplished but profligate statesman."—*Europe during the Middle Ages*.

I would refer those who desire further acquaintance with this "the most characteristic personage in the history of the Papacy during the Renaissance period,"—"a Gil Blas of the Middle Ages,"—to two excellent articles in "Macmillan's Magazine," by Mr. Creighton, vol. xxvii. 1873.

1. *Obv.*—PIVS · II · PONT · MAX. Bust of the Pope to left, wearing a cloak called the "mozzetta" and the close-fitting cap called the "camauro"—"la coiffure habituelle d'un pape malade," says M. Artand.
Rev.—GLORIA * SENENSI * DI * CAS * PICCO, LOMINI * Arms of the Piccolomini, *argent*, a cross, *azure*, charged with five crescents, *or*. Above, the keys, and oval-shaped tiara. Size 12.

Venuti calls attention to this legend, partly in Latin, in part Italian, as a proof of ignorance on the part of the medallist; asterisks take the place of points in dividing the words of the reverse legend.

2. *Obv.*—Portrait, as on preceding medal, Venuti. But according to Friedländer and Armand [I. p. 50], the portrait resembles that on 4, with the legend, PIVS · PAPA · SECVNDVS · ENEAS · SENEN.

Rev.—PONT · ANNO · SECVNDO · MCCCCOLX. Arms of the Piccolomini on a shield; behind, the keys; above, the tiara. Size 12.

This medal is known commonly in its recent form [No. III. of Venuti's]; but in Dr. Friedländer's work ("Italian Medals of the Fifteenth Century"), under the works of the medallist Guazzalotti, he describes one, which doubtless is the work of the fifteenth century, with obverse, *not* "as in preceding medal," but with head bare, as in other early medals. Among Piccolomini's household gods the Piccolomini themselves must be included. Corsignano, his birthplace, is renamed Pienza, after himself; he erects it into a bishopric, he employs Francesco di Georgio, the architect, to design for it a palace and episcopal church—"as splendid and magnificent as they could be," wrote Vasari. Sienna was raised to an archbishopric, and he actually bestowed on it Radicofani, though it formed part of the States of the Church, besides other tokens of his favour. Did this tincture of a

profuse partiality colour one of the high official acts of his reign, when he canonized St. Catherine of Sienna?

3. *Obv.*—The same legend and type as in 1 and 2.

Rev.—OPTIMO · PRINCIPI. Size 12.

I have not seen this medal; Venuti describes it as *cast*, a presumption in favour of its authenticity. The legend on the reverse of course imitates well-known reverses on Roman coins. It appears to have escaped the notice of M. Armand. Among the good deeds of this Pope it must not be forgotten that, while others robbed the ruins of ancient Rome to build palaces for themselves, he, when elected Pope, to prevent such malpractices issued the bull, "De antiquis Ædificiis non diruendis."

4. *Obv.*—ÆNEAS PIVS SENENSIS PAPA SECVNDVS.

"Effigies, ut in præcedentibus" (Venuti). "Bust, 1. in papal robes, bareheaded." (Mr. Keary, "Guide to Italian Medals," p. 80.)^o

Rev.—✿ DE SANGVINE NATOS · ALES VT HEC CORDIS PAVI. Pelican feeding her young. Compare this with Pisano's reverse on the medal of Vittorino da Feltre, "Guide to Italian Medals," p. 5. And, observe how this "rose" connects Guazzalotti's work here with that on No. 1. of Calixtus III. Size 12.

This rare medal is found in the British Museum collection, and another example is in the cabinet of J. H. Mid-

"These two descriptions of the obverse do not present the same portrait. How are we to reconcile them? The medal figured in the "Guide to Italian Medals," Pl. III. 808, presents a lusty friarlike-looking man, not the ascetic Piccolomini of the other medals. Venuti's "ut in præcedentibus" again is highly unsatisfactory, for the contemporary medal exists, and its obverse ought to have been known to him. I have no hesitation in regarding the ascetic likeness as the creation of after-times; the other portrays Æneas Piccolomini, as in his published letters he very candidly portrays himself.

dleton, Esq., F.S.A., a member of our Society.⁴¹ The words on the reverse were suggested by Monsignor Campani, author of a life of this pontiff. Its application to Pius II. is apparent when we recollect how surviving friends attributed his death to one cause only, zeal against the infidel,—it was a laying down of life, they said. “It is in association with the crusading spirit that Pius is generally judged,” says Mr. Creighton. Certainly in his life-work there was no scant service, and he died in harness.

5. *Obv.*—PIVS · II · PONT · MAX. Bust of the Pope, as before, in Nos. 1—3.

Rev.—VELOCITER · SCRIBENTIS · SOBOLES. A table, covered by a fringed cloth, stands on a tiled floor; on the table are a number of bound books with clasps. One stands open, and on its pages can be made out IMPROBA TVRCARVM LEX. In the exergue, NE · TANTI · ECCLESIE · PACIS-
QVE · AMANTIS · DELEATUR · MEMORIA.
Size 12.

A memorial medal; though not signed, I think M. Armand must be right in assigning the workmanship to Paladino. Venuti describes it as “cast”; those which I have seen have been struck. It was in the spirit of this legend, “Ne tanti deleatur memoria,” that Cardinal Piccolomini (afterwards Pius III.) caused ten celebrated frescoes to be painted in the library of the cathedral at Sienna, by Pinturicchio, representing scenes in the life of his distinguished predecessor. Vasari describes them fully. There are no fewer than thirty-five pages of the Brit. Mus. Library Catalogue occupied merely with the titles of his books—various editions—the “*soboles*” of this prolific writer. His mind was of the

⁴¹ At Sir William F. Douglas's sale of medals, May, 1883, one of this type formed Lot 11, and was sold for £11; it is described in the catalogue as “very fine.”

sort sometimes called encyclopædic; a treatise of his, on "The Nature of the Horse," lies unprinted to this day.

The Pope, as he is represented by M. Artaud, "un pape malade," was a victim to gout, gravel, and an obstinate cough, though spare of frame and sparing in diet. Little in stature, of pale complexion, and with his hair gone, he appeared older than he really was. One cannot fail to observe how this representation of his appearance fails to correspond with the burly figure which appears on No. IV., and again on that with the reverse "Arms of the Piccolomini," in the South Kensington Museum Collection.

6. *Obv.*—PIVS · II · TERMAX · PONTIFEX. "Effigies ut in aliis" (Venuti).

Rev.—Three pedestals, adorned with garlands. Above the right-hand one is an eagle; above that, on the left, is a ewan. Over the middle pedestal stands a Cherub, with wings folded in the form of a cross.⁴²

This rare medal, cast in oval form, I have never seen. Venuti says the reverse points to the Pontiff's famous erudition in three Arts, theology, philosophy, and *in literis humanis*. A prolific writer, among other books he wrote a novel! Translated into various languages, it appeared in English,—"*The historie of Eurialus and Lucretia*," written in Latine by Æneas Sylvius, and translated into English by C. Allen, London, 1639."⁴³

ASSHETON POWNALL.

⁴² There is another medal, with the head of Pope Pius II., and a reverse *INSPERATA · FLORVIT*, which, not merely on Venuti's authority, I exclude from our catalogue, as being spurious.

⁴³ "*Enee Silvii poete Senensis de dnohne amantibus Eurialo et Lucretia opusculum*" is the Latin title of the original.

XIII.

RARE AND INEDITED SICILIAN COINS.

HAVING recently had the opportunity of increasing my collection with some very fine Sicilian silver coins, I am very happy to make use of Mr. Head's kind permission to publish and illustrate some of them, with an autotype plate, in the "Numismatic Chronicle."¹

AKTNA.

1. *Obv.*—**AITNAION** Head of Seilenos, r., crowned with ivy; beneath neck scarabons; border of dots.

Rev.—Zens seated r. on a richly ornamented throne covered with a lion's skin; he wears an *imátiav*, which hang over his left shoulder and arm, and holds in his l. hand a winged thunderbolt; the upper right part of the body is naked, the r. arm, slightly raised, rests on a natural knotted sceptre; in the fold in front of the figure an eagle, r., perched above the top of a pine-tree.

R. 1. Wt. 266 grs. [Pl. IX., No. 1.]

This coin I consider to be the most important of the whole; its state of preservation is as good as can be desired, and the reverse type entirely new and most interesting. The only types which I have found bearing a certain resemblance to this one, belong to the old Arcadian federal

¹ These coins were formerly contained in a private collection in Sicily, and I feel sure that their description will be of some interest to the readers of this periodical, especially as two at least out of the number are entirely unpublished, and bear types which have not yet occurred. I will also seize this opportunity for describing some uncommon Sicilian copper pieces, which I purchased on previous occasions.

coinage, illustrated in Von Sallet's *Zeitschrift für Numismatik*, vol. iii., Pl. VII., Nos. 2, 4, 8, and 10.

The head on the obverse is similar to that on the well-known small silver coins with ΑΙΤΝ or ΑΙΤΝΑΙ, which Mr. Gardner, in the Catalogue of the British Museum, p. 43, classes as having been struck at Catana, under the name of Aetna, between the years 476 and 461 B.C. The style and workmanship of the head on our coin bears a striking likeness to that of the head of Dionysos on the tetradrachms of Naxos figured in the "Numismatic Chronicle," New Series, vol. xvi., Pl. III., No. 9., and B. M. Guide, Pl. XVII., 29, and would thus confirm the attribution of this issue with the name of Aetna to the date just mentioned.

Another reason which undoubtedly proves the connection between my tetradrachm and the small coins above-mentioned, is to be found on its reverse; the thunderbolt held by Zeus being the same as that which forms the principal type on the reverse of the small coins of Aetna, and which also occurs on some coins of Catana, having also on the obverse the head of Seilenos (B. M. Cat. Sicily, p. 42, Nos. 8, 9, 10, and 11).

GELA.

2. *Obv.*—Naked bearded horseman, r., wearing only a helmet; his r. holds aloft spear, his l. reins, horse prancing.

Rev.—CEAAΣ Man-headed bull, r., prancing, his tail turned up over his back.

R. 0.95. Wt. 268 grs. [Pl. IX., No. 8.]

I have found no description of a coin quite similar to this: didrachms of Gela, with a nearly identical obverse, are not rare, but the reverse type on my tetradrachm is the only instance at Gela where the entire body of the

man-headed bull is represented, while the other coins of this city all bear the forepart only of this monster.

GELA.

3. *Obv.*—Young head of river-god, l., with short horns, wearing taenia; around three river fishes.

Rev.—ΓΕΛΩΝ (in ex.) Quadriga, r., driven by Nike wearing long chiton; horses walking; above, olive-wreath; plain border.

Æ. 1.05. Wt. 266 grs. [Pl. IX., No. 5.]

This coin has been described and illustrated several times, for instance in the British Museum Cat. Sicily, p. 71, No. 54, and I have had an autotype of my coin added on the plate only on account of its exceptional state of preservation.

GELA.

4. *Obv.*—ΣΙΛΟΠΙΣΟΣ Forepart of man-headed bull, r., crowned by a female figure wearing chiton; she stands facing, head l., and holds olive-wreath in her r. hand, her l. extended open.

Rev.—ΝΟΙΟΛΕΓ (in ex.) Quadriga r., driven by male charioteer, wearing long chiton; he holds a goad in r. and reins in both hands; horses walking; above, Nike flying r. and crowning horses; border of dots.

Æ. 1.2. Wt. 265 grs. [Pl. IX., No. 4.]

This coin also is not inedited, similar ones being described in the Catalogue of the Northwick Collection, p. 28, No. 279, and in Mionnet, Supplement I., p. 388, No. 205; my reason for having it figured here is that the only engraving of a coin of this description, in Torremuzza, Pl. XXXII., No. 1, entirely fails to give a fair idea of its style, which, although a little archaic on the reverse, I would class to the beginning of the period of

finest art. The legend ΣΩΣΙΡΟΛΙΣ also occurs on some small gold coins of Gela, where it appears round the head of a nymph, so that it seems rather to refer to her than to the river-god.

ZANCLE.

5. *Obv.*—Male figure advancing, r., wearing chlamys, with ends falling over both arms, hurling thunderbolt with r. hand; l. extended forward over altar with architectural design and honeysuckle ornament; border of dots.

Rev.—**ΔΑΝΚΛΑΙΟΝ** Dolphin l.; beneath, scallop shell; border of dots.

Æ. 0.95 by 1.15. Wt. 263 grs. [Pl. IX., No. 2.]

Although the general attitude of the figure on the obverse, as well as the marine types on the reverse, rather point to a representation of Poseidon, I think it is meant for Zeus, and the object in the right hand, which a defect in the striking of the coin prevents us from distinguishing with certainty, is most likely a thunderbolt. The type was also described as Zeus, when this coin was mentioned, only from a metrological point of view, in Dr. Imhoof-Blumer's paper, *Die Euhoeische Silberwährung* (Monatsbericht of the Berlin Academy, June, 1881, p. 667). He had seen it in its former owner's collection in Sicily.

In accordance with Dr. Imhoof's theory my coin weighs as much as three of those of about 85 grains, with dolphin and **ΔΑΝΚΛΕ** on the obverse, and the peculiar reverse with a scallop shell in its centre; at the same time it is identical in weight with the tetradrachms in use in the other Sicilian towns. If one does not admit that the issue of pieces weighing 85—90 grains, which occurs at a remote period at Himera, Naxos, Zancle, &c., is based on the same standard as the Attic coinage of the rest of the





island, my coin would form the link between the two systems, being equal to 3 units of the one and to 4 of the other.

FEDERAL COINAGE.

6. *Obv.*—Head of Sikelia, r., wearing earring, necklace, and diadem (?); hair rolled; in front . . . **L** . . . **A**; plain border.

Rev.—**[ΣΥ]MM A X IK ON** Lighted pine-torch fixed in the ground between two stalks of barley; plain border.

Æ. 1·2. [Pl. IX., No. 6.]

This is a variety of the coin described in the British Museum Catalogue, Sicily, p. 29, No. 3, and supposed to have been struck at Alaesa by Timoleon and his allies.

Although only the final **A** of the legend on the obverse remains, there is scarcely a doubt that the traces of the third letter before it are those of an **E**, and consequently the inscription ought to be completed into **ΣΙΚΕΛΙΑ**.

ENNA.

7. *Obv.*—Head of Persephone, r., wearing earring and wreath of corn.

Rev.—**ENNA** (in ex.) Goat (?) standing r., before a lighted pine-torch, between two stalks of barley.

Æ. 1·2. [Pl. IX., No. 7.]

I do not think this coin has ever been published correctly before. Mionnet, i. p. 233, No. 207, gives a very similar specimen after Torremuzza, Tab. XXVIII., 4. On this not very well drawn plate, the types are the same as on my coin, only there is the legend **ΔAMATHP** added on the obverse, which may have existed on my specimen, but is not to be read any longer. The principal difference, however, is that on Torremuzza's plate and in

Mionnet the diameter of the coin is given as 0·8 of an inch, while mine measures 1·2. Judging from its general appearance, style, and especially the similitude of the reverse type, it must be a contemporary of No. 6.

NAONA.

8. *Obv*— . . .  NAION Head of nymph, r., wearing earring and necklace; hair confined by fillet passing four times round; border of dots.

Rev.—He-goat standing, r.; above, pellet and bunch of grapes; in front, leaf of ivy; plain border.

Æ. 0·45. Wt. 23 grs. [Pl. IX., No. 8.]

I bought this coin at the Bompois sale, in the catalogue of which (1882) it is described, p. 34, No. 448. It is designated by the single pellet, the mark of value, and by its weight, as the Uncia corresponding to the Trias in the British Museum Catalogue, Sicily, p. 117; by a singular coincidence the remains of the inscription on my specimen just form the complement of that on the London coin.

L. DE HIRSCH DE GEREUTH.

XIV.

REMARKS ON TWO UNIQUE COINS OF AETNA AND ZANCLE.

To the excellent descriptions of the two unique silver coins of Aetna and Zancle (Pl. IX. 1 and 2) which the Baron de Hirsch has contributed to the pages of the "Numismatic Chronicle," I may be allowed to add a few comments by way of further illustration.

The marvellous coin of Aetna, now first published, presents us on its reverse with a conception of Zeus in many respects very remarkable, and to the best of my knowledge not found elsewhere on coins. The attributes and adjunct symbols both on obverse and reverse, taken in conjunction with the type, may aid us in particularizing the idea of Zeus which the artist has endeavoured to convey.

They give it a local colouring, so to speak, which the ordinary type of Zeus enthroned, familiar to us all (as *e.g.* on the coins of Alexander the Great), does not possess.

In the first place the god rests his right hand upon a natural-knotted staff, bent into a crook at the top, instead of upon the ordinary royal sceptro. This peculiarity he shares, as the Baron de Hirsch has pointed out, with the Arcadian Zeus, who was worshipped on the summit of Mount Lycaenum; but on the coin of Aetna the staff is

extremely thin and slight, and exhibits the zigzag appearance which is characteristic of the growth of a stick of vine-wood, which I take it to be.

It can hardly be doubted that the Zeus here represented is the great god of Mount Aetna, the volcanic soil of which was especially favourable to the cultivation of the vine, whence perhaps the vine-staff on which the god rests his arm. See Strah. p. 269. Καθάπερ οὖν τὸ πῆγανον τῇ ξυλίνῃ σποδῶ τρέφεται, τοιοῦτον ἔχειν τι οἰκίωμα πρὸς τὴν ἀμπελον εἰκὸς τὴν Αἰτναίαν σποδόν.

Over the whole Aetna region Zeus was worshipped under the name of Ζεὺς Αἰτναῖος :—

ἀλλ' ὦ Κρόνου παῖ, ὃς Αἶτναν ἔχεις,
ἱκὼν ἀνεμόεσσαν ἑκατογκεφάλῃ
Τυφῶνος ὀμβρίμην.

Pind. Ol. iv. 10.

In the year B.C. 479 according to the Parian marble, or 475 according to Thucydides (III. 116), occurred the first great eruption of Mount Aetna of which we have any historical record, and it was about this time (B.C. 476) that Hieron took the city of Catana which stood beneath the mountain and changed its name to Aetna, expelling its ancient inhabitants and peopling it afresh with Syracusans. By the new citizens Hieron was solemnly proclaimed oekist or founder, κτίστωρ Αἰτνάς. (Pind. Fr. 71).

The city was placed under the special protection of Ζεὺς Αἰτναῖος, to whom Pindar has addressed one of his most splendid odes (*Pyth.* I.), in which in magnificent word-painting he describes the late eruption of the volcano, "Whereout pure springs of unapproachable fire are vomited from the inmost depths; in the day time rivers (of lava) pour forth a lurid rush of smoke, but in the darkness a red rolling flame beareth rocks with a

plash to the deep plain of the sea;" and further he invokes the god who haunts the mountain and prays that the newly founded city may find favour in his sight:—

εἴη Ζεῦ, τὴν εἴη Γανδάνειν,
ὅς τοιτ' ἐφέπεις ὄρος, εὐκάρποιο γαί—
ας μέτωπον, τοῦ μὲν ἐπωνυμίαν
κλεινὸς οἰκιστὴρ ἐκύδανεν πόλιν
γαίτονα. κ. τ. λ.

It is noteworthy that across the throne of the god is spread the skin of a lion, or of some other mountain-hred beast of prey, but the most characteristic symbol on the reverse is undoubtedly the Pine tree, ἐλάτη or πεύκη, with which, according to Diodorus (XIV. 42) the slopes of Aetna were once richly clad: τὴν Αἴτην ὄρος γέμον κατ' ἐκείνους τοὺς χρόνους πολυτελοῦς ἐλάτης τε καὶ πεύκης. So also Pind. *Pyth.* I. 53: Αἴτρας ἐν μελαμφύλλοις κορυφαῖς, and on the summit of the Pine-tree, again to use the words of Pindar, "the Eagle of Zeus sleepeth, slackening his swift wings on either side and heaving his supple back in slumber." (*Pyth.* I. 10).

On the reverse we note therefore two indications (the staff of vine-wood and the pine-tree) that the deity represented is the presiding god of Mount Aetna, beneath whose shadow the city stood.

The obverse type and adjunct symbol are also equally characteristic of the place of issue. Seilenos, as we learn from Euripides' Satyric drama *Kyklops*, was enslaved by Polyphemos, and dwelt in the caves of Aetna with his savage master. More generally the head of Seilenos may be taken as pointing to the cultus of Dionysos, who, as we know from other coins, was especially revered at Catana; but, as if still further to specialize the locality, the artist has placed beneath the head of Seilenos one of those huge

scarabei, *κάνθαροι*, for which Mount Aetna was celebrated. See Aristophanes, *Pac.* 73:—

εἰσήγαγ' Αἰτναῖον μέγιστον *κάνθαρον*,

and the Scholiast's remarks on this passage:—

μεγάλοι λέγονται εἶναι κατὰ τὴν Αἰτνὴν *κάνθαροι* μαρτυροῦσιν δὲ οἱ ἐπιχώριοι, Ἐπίχαρμος ἐν Ἡρακλεῖ τῷ ἐπὶ τὸν ζωστήρα "Πυγμαρίων λοχαγὸς ἐκ τῶν *κυνθάρων* τῶν μειζόνων ὃς φασὶ τὴν Αἰτνὴν ἔχειν." τρόπον δέ τινα καὶ Αἰσχύλος ἐπιχώριος· λέγει δὲ ἐν Σισύφῳ πετροκυλιστῇ "Αἰτναῖός ἐστι *κάνθαρος* βλά πόνων." Σοφοκλῆς Δαίδαλῳ "ἀλλ' οὐ μὲν δὴ *κάνθαρος* τῶν Αἰτναίων πάντως." λέγει δὲ πάντως εἰκάζων εἰς μέγαν. Πλάτων ἐν Ἑορταῖς "ὥς μέγα· μέντοι πάνυ τὴν Αἰτνὴν ὅρος εἶναι φασὶ τεκμαίρον, ὅθεν τρέφεσθαι, τὰς *κυνθάριδας* τῶν ἀνθρώπων ἐστὶν λόγος οὐδὲν ἑλάττους."

With regard to the time of issue it may be remarked that Catana bore the name of Aetna for about fifteen years, but in B.C. 461, its old inhabitants drove out the Aetnaeans and the city once more recovered its original appellation.

In point of style the tetradrachm of Aetna exhibits some technical peculiarities which are noticeable on certain other Sicilian coins struck apparently before B.C. 476. Thus the hard stiff folds in which the *ἱμάτιον* of Zeus falls about his body bear a close resemblance to the folds of the chiton of Niko on a tetradrachm of Catana (B. M. *Guide*, Pl. IX. 25), and the somewhat awkward way in which the eagle with closed wings sits above, but not actually touching the top of the pine-tree, may be compared with the equally unusual manner of depicting a bird (in this case an aquatic bird) with closed wings, standing, without any support, in the field of the obverse of the same coin of Catana, above the back of the bull.

In fabric, as well as in style, these two coins resemble one another so closely (cf. the circular incuse, the border of dots, &c.) that one might almost be justified in ascribing them to the same workshop of the same engraver.

Another coin which in style is also extremely like our Aetnacan tetradrachm is the unique piece of Himera in the cabinet of the Prince of Waldeck (Imhoof. *Mon. Gr.* Pl. B. 3). On this coin also the Nymph Himera wears an ample peplos, the folds of which are indicated in precisely the same stiff and linear manner which is so remarkable on the coin of Aetna. All three pieces are certainly almost contemporary, and the date of the Aetna coin B.C. 476—461 may serve to fix the date, within a little, of the other two.

Let us now turn to the tetradrachm of Zancle of Attic weight (Pl. IX. 2). This coin is not only of the highest metrological interest, as the Baron de Hirsch and Dr. Imhoof-Blumer have already pointed out, but it is a document of considerable archaeological importance for the history of Greek art.

From the very advanced style of the figure of the striding Zeus on the obverse I should have been inclined to attribute it to about the middle of the fifth century, but according to our historical data the name of Zancle was no longer in use after the death of Anaxilas in B.C. 476, it having been superseded by that of Messana either at the time of the first occupation of Zancle by a mixed body of Samians and Messanians, B.C. 494 (Herod. VII., 164), or on the expulsion of the Samians by Anaxilas some time before his death in B.C. 476 (Thuc. VI. 5), τοὺς δὲ Σαμίους Ἀναξίλῃς Πηγίων τύραννος ἐν πολλῷ ὕστερον ἐκβαλὼν καὶ τὴν πόλιν αὐτὸς (codd. αὐτοῖς) ξυμμίκτων ἀνθρώπων οἰκίσας, Μεσσήνην ἀπὸ τῆς ἐαυτοῦ τὸ ἀρχαῖον πατρίδος ἀντωνόμασε. Unless, therefore, we suppose that the name Zancle was not entirely discarded (cf. Paus. VI. ii. 10—where mention is made of the ancient Zancleacans at a later period as distinct from the Messanians), we are compelled to fix the

date of this most remarkable coin before B.C. 476. It may, however, be accepted as good evidence that the name of Zancle was not abandoned as early as B.C. 494. Even for a work dating from 476 the freedom of style and mastery of anatomical detail exhibited in the attitude of the figure of Zeus are, so far as I know, unexampled on any other ancient monument.

To the accurate descriptions of the other coins given by the Baron de Hirsch I have nothing to add, except that the coin of Gela (Pl. IX., 5) is not from the same die as the specimen in the British Museum (B. M. *Guide*, Pl. XVI. 24). My friend, Dr. Hermaun Weber, has, however, lately acquired a specimen of this rare piece, unfortunately in poor preservation, which is from the same dies as the remarkably fine specimen photographed on the Baron de Hirsch's plate.

As it is always satisfactory to be able to trace the *provenance* of coins as important as those of Actna and Zancle, I may mention that I have been informed that for many years past these two coins have lain in the cabinet of a well-known private collector at Catania, where they were seen some ten or fifteen years ago by Prof. Salinas of Palermo, and by Dr. Imhoof-Blumer. On the death of their original possessor they were offered for sale, with the rest of the collection, by Signor Verga, one of the heirs.

The British Museum not being in a position to give the large sum demanded for the collection, which, moreover, consisted for the most part of ordinary Sicilian coins already represented in the national coin cabinet, the whole was acquired by the late Signor Castellani, from whom the rarest specimens have passed into the cabinet of the Baron de Hirsch.

BARCLAY V. HEAD.

XV.

COINS OF ISAURIA AND LYCAONIA.

IN the first number of the new series of the *Revue Numismatique* (1883 ; pp. 24-63), His Excellency M. Waddington has made another valuable contribution to the numismatics of Asia Minor by publishing a list of all the coins of Isauria and Lycaonia known to him, including those given in the work of Mionnet. Many of these hitherto unpublished coins are contained in various European museums, and in the rich cabinet of the author himself. As, however, there are in the British Museum a few coins of these districts which have been acquired since M. Waddington made his notes on that collection it may be useful to offer a description of them here, in order to give still greater completeness to his list.

CARACALLA.

1. *Obv.*—A · K · M · (AYP?) ANTΩNEINO. Bust of young Caracalla, r., laureate.

Rev.—ΚΑΡΑΛΛΙΩΤΩΝ. Artemis standing r., holding torch with both hands ; at her back, crescent.

Æ. Size 9.

2. *Obv.*—AY · KAI · Π · ΔΙΚ · ΟΥΑΛΕΡΙΑΝΟΝ · ΕΥ.
Bust of Valerian, senior, r., laureate ; in field, r., Η.

Rev.—ΚΑΡΑΛΛΙΩΤΩΝ. Pallas standing, holding in r. Victory, in l. spear ; behind her, shield.

Æ. Size 1·8.

ISAURA.

3. *Obv.*—ΑΥ · Κ · Μ · ΑΥ · ΑΝΤΩΝΙΝΟC. Bust of young Caracalla, r., laureate, and wearing cuirass.

Rev.—ΜΗΤΡΟΠΟΛΕΩC ΙCΑΥΡΩΝ. Male figure (Caracalla) standing, r., wearing paludamentum and cuirass, his l. resting on spear; he gives his r. hand to Apollo, who stands looking l., naked, and holding branch in l.; between the two figures, hind, looking back.

Æ. Size 1·05.

In describing this coin from the British Museum collection, M. Waddington (p. 38, No. 2) states that the figure on the left of the reverse is Hermes, holding the caduceus. But the figure certainly holds nothing but a spear, and the details of a military costume can be clearly made out. The coin corresponds, in fact, with another issued by Caracalla for Isaura (Waddington, p. 39, No. 3), on which a military figure leaning on a spear is seen giving his hand to Apollo, while a stag lies down between them.

DALISANDUS.

4. *Obv.*—ΑΥΤΟΚ · ΚΑΙC · Α · ΑΥΡΗ · ΟΥ . . .
Radiate head of L. Verus, r.

Rev.—ΚΟΙΝ · ΑΥΚΑ · ΔΑΛΙCΑΝΔΕΩΝ. Zeus seated on throne, l., wearing mantle over lower limbs; in his outstretched r. he holds patera.

Æ. Size '9.

No coins of Dalisandus are known to M. Waddington, and the present specimen was only acquired by the Museum last year, from Mr. A. J. Lawson. The coin previously attributed by Borrell ("Num. Chron.," 1846, p. 2) to this place is given by M. Waddington to Laranda: its legend is very uncertain.

ICONIUM.

5. *Obv.*—IMP · CAES · M · ANT · GORDIANVS.
Bust of Gordianus Pius, r., laureate.

Rev.—COL · AEL · ADR · ICONIEN. In ex., S R.
Veiled priest guiding plough drawn by two oxen,
r.; behind, two military standards.

Æ. Size 1·85.

6. *Obv.*—I[MP] · CAES · M · AN · GORDI[AN]VS
[? in ex. S R]. Bust of Gordianus Pius, r.,
laureate.

Rev.—ICONIESI ADRIA COL. Fortune wearing
modius, seated l.; she holds in r. branch (?)
and rudder, in her l. cornucopiae; before her,
sphinx (?); beneath her seat, wheel.

Æ. Size 1·4.

7. *Obv.*—IM · C · P · L · GALLIENVS · AV. Bust of
Gallienus, r.

Rev.—ICONIENSIVM · COL, in ex., S R. Wolf, r.,
suckling Remulus and Remus.

Æ. Size 1·15.

No. 7 is not described by M. Waddington, though he refers to it. It will be seen that it is somewhat different from his No. 24 (p. 49).

8. *Obv.*—IMP · C · P · LIC · GALLIENVS · P · F. Bust
of Gallienus, r., radiate.

Rev.—ICONIEN · COLO, in field, S R. Helmeted
Pallas standing l., holding in r. patera, in l.
spear, round the lower part of which a serpent is
coiled; before her, shield.

Æ. Size '9.

Pallas occurs on other coins of Iconium, but not with the serpent. In its twining round her spear as it does round the staff of Asklepios we may perhaps see an allusion to her functions as a goddess of healing—Athena Hygieia.

ILLSTRA.

9. *Obv.*—ΑΛ · ΣΟΠΠΑΙΦ · ΝΟΙΑΥΟΙ · Μ. Bust of Philip, jun., l., laureate.

Rev.—ΙΑΙΣΤΡ[ΕΩ]Ν · ΚΟΙΝΟΝ · ΛΥΚΑΟΝΙΑΣ.
Herakles, naked, standing facing, with head turned towards r.; in his r. he holds club, in l. lion's skin.

Æ. · Size 1·05.

The emperor and god are new in the coinage of Ilistra.

COINS OF TYRA (SARMATIAE).

I may take this opportunity of referring to a coin also published (by M. Muret) in the first number of the new *Revue Numismatique* (1883, tom. i., p. 64, Pl. II. 1), namely the rare autonomos silver piece of Tyra in Sarmatia, from the French collection.

The British Museum possesses a similar specimen which is worth noting here, as it was acquired (at the Sparkes sale) subsequently to the publication of the *Museum Catalogue of the Coins of Thraco*. The obverse of the French coin, according to the engraving and description of M. Muret, has simply a head of Demeter: but on the Museum specimen (weight, 86 grains) a band or stephane appears above the forehead of the goddess, above which, again, are two ears of corn laid horizontally, the whole being surmounted by the veil. The necklace on the Museum specimen has a pendant attached to it. The reverse of the latter coin is similar to the French, though not apparently from the same die, and the letter A is visible between the hind legs of the hull. The French specimen appears to be less satisfactorily preserved than the English coin, which may perhaps account for these discrepancies in the two descriptions.

WARWICK WROTH.

XVI.

UNPUBLISHED CISTOPHORI.

THE well-known memoir by Dr. Pinder upon the peculiar class of Greek coins, known in ancient times, as well as to modern numismatists, by the distinctive appellation of "Cistophori," has become, ever since its publication, the standard work of reference upon the subject. There remains, indeed, little to be added to his comprehensive survey of this extensive but peculiar and isolated branch of the Greek coinage. But his enumeration of its many minor varieties was, even at the time when it was issued, far from complete, and recent researches have added much to our acquaintance with this, as with all other classes of the coins of Asia Minor. Thus, in Mr. Head's valuable paper on the coins of Ephesus,¹ he has been able to describe fifteen varieties of "undated" Cistophori of that city alone, and above forty varieties of the dated coins, while Dr. Pinder was acquainted with only ten of the former, and thirty of the latter class. As my collection enables me to add materially to the number of such varieties, especially to those of the earlier or undated class of coins, as well as to those struck in other cities of Asia contemporaneously with them, I propose to present the readers of the "Numismatic Chronicle" with a brief

¹ "Num. Chron.," N.S., vol. xx. pp. 145—152.

notice of all the coins of this class in my cabinet which are not mentioned either by Dr. Pinder or Mr. Head. Such a catalogue would, however, have comparatively little interest, were it not for some considerations which have suggested themselves to my mind in connection with it, and which have a direct bearing on the still uncertain question of the period and circumstances of the introduction of this peculiar coinage.

I begin with the Cistophori of Ephesus, as presenting the most complete series; indeed, the only one in which the three subordinate series—the undated coins, those marked with a date, and those which bear the name of a Roman magistrate—are all distinctly represented.

UNDATED COINS.

1. *Obv.*—Serpent issuing from the half-open cista mystica, within a wreath of ivy.

Rev.—Bow-case between two serpents; in the field to l., head of Greek Artemis facing to r.; in field r. ΕΦΕ. Pl. X. 2.

Only one variety is mentioned by Pinder, in which the name of the city is found to the right of the principal type, and the accessory symbol (a head of Helios, seen in front) to the left. The same variety, and no other of the same disposition, is found in the British Museum.

- 2.—Same types on obverse and reverse, but the letters ΕΦΕ in field to left of the bow-case (as in all the following coins), and on the right, a bee within a wreath. Pl. X. 1.

This elegant symbol is not found on any of the Cistophori described by Dr. Pinder or by Mr. Head,² but nine

² Mr. Head has, however, described and figured (Pl. IV. Fig. 13), from a specimen in the British Museum, a quarter Cistophorus, or drachm, with the same emblem in the field.

specimens of this variety were contained in a small find to which I shall have occasion further to refer, and two of these are in my cabinet.

- 3.—Same as preceding coin, but in field to r. a stag standing, with a column behind it, which supports a small figure of the Græsk Artsmis.
- 4.—Same as before, but in field to r. a palm-tree.
- 5.—Same, but to r. the head of a lion (?).
- 6.—Same, but in field a rudder.
- 7.—Same as No. 2, but has not in a wreath.
- 8.—Same, but in field Greek Artomus, standing, to r., before has a stag.

All the above coins, with the exception of No. 1, were derived from the small find already mentioned, which contained in all twenty coins of Ephesus. None of these had a date.

DATED COINS.³

- 9.—Usual types, on reverse date ID ; above the bow-case, between the serpents' heads, a lighted torch; in field to r. a long torch.

This date is not found in Mr. Head's list; it therefore serves to fill up a gap in the series of years.

- 10.—Same as before, but the date ΞA , and between the serpents a stag, standing.


Also an unpublished date, but the stag, as a symbol, is

³ There is one coin described by Dr. Pinder and by Mr. Head in his list with the letter **K** in the field, which they do not regard as a date, though it occupies the same place on the coin that is usually so interpreted, because the coin in question has in the field on the right a small bust of the Greek Artsmis, and wants the long torch which appears to be characteristic of the usual series bearing dates. Notwithstanding this variation it appears to me more probable that the letter **K** is intended for a date. The year 20 is not represented in the regular series of dated coins.

found, according to Dr. Piunder, on a Cistophorus with the date of the year 8 (H).



The following Cistophori of other cities in Asia Minor are arranged in geographical order.

PARIUM.



- 11.—Usual types; in field l. the monogram ; on r. a wreath with dangling fillets.

The accessory symbol is new, and as a wreath is of common occurrence on the coins of Parium, may serve in some degree as a confirmation of the attribution of the Cistophori with the above monogram to Parium, on which doubt has been thrown by Dr. Pinder.

ADRANYTTIUM.

- 12.—Usual types; in field l. the monogram ; above, between the heads of the serpents, the monogram ; in field to r. a diota.

The symbol is new, though the monogram is the same as Pinder's No. 5.

- 13.—Same as preceding, but in field to r. a filleted caduceus; above, two monograms  and .

Slightly varied from Pinder's No. 4.

PERGAMUM.

The Cistophori of this city are by far the most numerous of all, though they do not present so many varieties, and do not form nearly so interesting a series as those of Ephesus. But I think all collectors will concur with me in regard to the fact that while the coins of Pergamum of this type are decidedly common coins, those of Ephesus, as well as the other cities of Asia, are comparatively rare, and seldom occur in ordinary or miscellaneous sales. The

point is one of considerable importance in determining the origin and circumstances of this peculiar coinage.

It is hardly necessary to remark that there are no *dated* Cistophori of Pergamum. They may, however, be divided into two classes, corresponding nearly with the undated and dated coins of Ephesus: the first consisting of those which have varied accessory symbols in the field, but no letters or monograms above the bow-case; the others have the invariable symbol of a thyrsus with a serpent twined around it, and two or more letters in the upper field of the coin, generally accompanied with the monogram $\Pi\Upsilon$ for $\Pi\text{P}\Upsilon\text{T}$, showing that the letters are evidently the initials of a magistrate's name.

Of these the latter class is very much the most common. Dr. Pinder has only seven or eight varieties of the former, to which the small "find" already adverted to enables me to add the six that follow.

- 14.—Usual types; the monogram $\Pi\Upsilon$ (as usual on all the coins of this city) in field to l., to r. a caduceus, horizontal.
- 15.—Same as above, but with bunch of grapes as accessory symbol.
- 16.—Same, but with standard.
- 17.—Same, with ivy-leaf.
- 18.—Same, with eagle standing.
- 19.—Same, with vase placed horizontally.

The following coin is in some degree intermediate between the two classes, like those numbered 85 to 88 in Dr. Pinder's list.

- 20.—Types as before; above Δ ; in field to r. thyrsus with fillets.

The next two distinctly belong to the second class.

- 21.—Same as above, with monogram Λ between the heads of serpents, in field thyrsus with snake round it, as on all the coins of the second class.

- 22.—Types as usual, but with $A\Sigma$ above the monogram of $\Pi\rho\Upsilon\Upsilon$.

To these I may add a coin of the third class; those bearing the names of the Roman governors of the province, in addition to the names of local magistrates. This interesting class of coins has been fully investigated and described by Dr. Pinder, but subsequent researches have added to the number of varieties. Of Pergamum he describes only four coins of this class, three of them struck under the government of C. Claudius Pulcher, who was proconsul in Asia from the year of Rome 699 to 701 (B.C. 55—53), and the other, which is a very peculiar variety, bearing the name of Q. Metellus Pius Scipio, of whom no other coins are known.

- 23.—Types as usual; in field above $C \cdot FABI \cdot M \cdot F \cdot$
 $PRO \cdot COS$ in two lines; beneath $\Delta HMEAC$.
 Pl. X. 4.

Coins of C. Fabius, who was proconsul of Asia in u.c. 696—697 (B.C. 58—57), are given by Pinder from Apamea, Ephesus and Tralles, but none has yet been published that was struck at Pergamum.

To the above list of coins of this type, undoubtedly struck at Pergamum, I am disposed, though with considerable diffidence, to add one that has long been a source of perplexity to me, and that in any case presents an anomalous exception to all other coins of the class.

- 24.—Types as on the coins of Pergamum, of the earlier class, without the monogram of $\Pi\rho\Upsilon\Upsilon$, or the initials of a magistrate's name, but having in the field to l. instead of the monogram of Pergamum (Π), a complicated monogram, composed apparently of Δ , I , N , and Y , with the addition of a lunated sigma or crescent, which is hardly joined to the monogram, though probably intended to form part of it; in the field to the r. is a diota, placed horizontally. Pl. X. 8.

The absence on this coin of the unfailing monogram of Pergamum, and the presence of another monogram in the place usually occupied either by that or by some other monogram indicative of the city where the coin was struck, as in the cases of Adramyttium and Parium, seem at first sight to leave no doubt that here also the monogram, though otherwise unknown, must be so interpreted. But repeated attempts, both on my own part, and on those of my numismatic friends, failed to suggest any plausible attribution,⁴ and the field of conjecture is materially narrowed by the circumstance that Cistophori certainly appear to have been issued only by cities of considerable importance. In this state of doubt, I observed that Dr. Pinder cites from the Museum at Munich, a coin which bears indeed the ordinary monogram of Pergamum, but has beneath it one which, though not identical with that on my coin, closely resembles it, especially in the position of the lunated sigma, and this suggested to my mind the probability that the monogram which had so long puzzled me was merely that of a magistrate, which had been placed by an error of the moneyer in the space which ought to have been occupied by the name of the city, and hence the latter had inadvertently been omitted altogether. A strong confirmation of this idea is found in the position of the diota that forms the accessory symbol in the field to the right, which is precisely similar to that on No. 19. above described. The same singularity of the accessory

⁴ I was at one time disposed to interpret the monogram as standing for Nysa, but this certainly leaves a Δ unaccounted for. Synnada, which is not known to have struck Cistophori, but may very well have done so, would suit better, but that it seems difficult to suppose that the lunated sigma, added as it were outside the monogram, could be taken for its first letter.

symbol being placed in a horizontal position or direction, if the coin be viewed in the ordinary manner, is found in several other instances on Cistophori of Pergamum—as in the case of the caduceus on No. 14, the flaming torch (Pinder, No. 84), and even the eagle on No. 18⁵—but so far as I have observed on those of no other city. Hence its occurrence on the coin in question appears to me almost conclusive as to its attribution, notwithstanding the omission of the otherwise universal characteristic of the monogram of Pergamum.⁶

SARDIS.

The Cistophori of this city are among the rarest of the series. Dr. Pinder has only six varieties, which, singularly enough, present the initials of the city in four different modes, as **ΣAP**, **CAP**, and two different monograms. Three of his varieties are in my collection; the following is unpublished.

25.—Usual types, with **ΣAP** in field to l., to r. a star.

To these I can add (No. 26) a half Cistophorus, of usual

⁵ The peculiar position of the accessory in these cases may perhaps be connected with that of the ever-present monogram of the city, which, as remarked by Dr. Pinder (p. 563), is always found in the half-inverted position of $\overline{\text{PP}}$, instead of the more natural PP .

⁶ A very similar case may be cited in the omission of the essential letters **AOE** from the two first series of the later Athenian coinage, though found on all others (see Boulé, "*Monnaies d'Athènes*," pp. 145—148). Even in our own days the well-known omission of the letters **D. G.** from the first issue of florins in England will serve to show that such accidents may happen, even in mints regulated with a degree of care and method which was certainly not to be found in those of ancient Greece.

types, with the monogram of Sardis, as on Pinder's Pl. I. Fig. 10. Pl. X. 5.

No half Cistophorus of Sardis has been previously published, this denomination being as yet represented only in the much more extensive coinage of Ephesus, Pergamum, and Tralles.

TRALLES.

The Cistophori struck in this city are very numerous, and present many varieties. They may be divided, like those of Pergamum, into two classes, besides those which bear the name of a Roman governor. Of these the second class, which have the name of a magistrate, are the most common. Dr. Pinder, however, enumerates eleven varieties of the first class, *without* any magistrate's name, to which I am enabled to add the following eight new ones, from specimens in my collection.

- 27.—Usual types; in field to l. **TPAA**; between the serpents' heads a star, and in field to r. a radiated head to r.; beneath, a complicated monogram. Pl. X. 6.
- 28.—Same types, and **TPAA**, as on all the following coins; in field to r. a laureated head (Apollo ?) to r.
- 29.—Same as above, but with head of Zeus on a sceptre in the field. Pl. X. 7.
- 30.—Same, but between the serpents' heads **A**, and in field to r. helmeted head of Pallas.
- 31.—Same, but in field an eagle standing with wings spread.
- 32.—Same, but in field an ear of corn.
- 33.—Same, but in field a thunderbolt.
- 34.—Same, but with bull's head in field.

The half and quarter Cistophori also, which are always much more rare than the full-sized coins, are less uncommon in the case of Tralles than of any other city. Pinder has a long list of the half Cistophori or didrachms. The following variety of the drachm or quarter Cistophorus is unpublished.

- 85.—Usual types; in field of reverse to l. ΤΡΑΛ, and to r. an eagle standing. Pl. X. 8.

LAODICEA.

The Cistophori of this city are numerous and varied; almost all of them have magistrates' names. The coin immediately following is an exception.

- 86.—Usual types; in field to l. ΛΑΟ, to r. a dog running, and beneath it a lyre.
 87.—Same as preceding, but in field, above the quiver and between the heads of serpent, ΚΡΑΤΙΠΠΟΥ.¹
 88.—Same, but with magistrate's name ΙΠΠΟΧΑΙΤΗΣ ΔΕΙΝΟΜΑΧΟΥ, and a winged caducene to r. (as in all the following coins).
 89.—Same, but with ΑΦΟΒΗΤΟΣ ΦΙΛΙΠΠΟΥ. Pl. X. 9.
 40.—Same, but with LENTVLVS IMP. above, and beneath ΚΡΑΤΙΠΠΟΣ. Pl. X. 10.
 41.—Same, but above PVLCHER IMP, and beneath ΑΠΟΛΛΩΝΙΟΣ ΕΥΑΡΧΟΥ.

Both these two last coins are new varieties of the comparatively small series of Cistophori which bear the name of Roman magistrates. The first differs only from that figured by Pinder (Pl. I. Fig. 27) in having a new name of the Greek magistrate below; but on the second it is worthy of note that Claudius Pulcher bears the title of Imperator (IMP) instead of that of Proconsul (PRO · COS.), which is not found on any coin previously published of Laodicea, though it appears on those of Apamea.

APAMEA.

The Cistophori of this city differ from a series from those of most others, inasmuch as they *all* have magistrates'

¹ The occurrence of this name on a coin of the second autonomous class, which is again found on a later coin (No. 40) associated with that of the Roman governor Lentulus, is worthy of notice. The name, however, is a common one, and may not refer to the same person.



names, and there are none that correspond to those of the first class of Ephesus and Tralles, with various symbols in lieu of magistrates' names. They *all* bear the unvarying symbol of a double flute in the field to right; in the same manner as those of the *second* class at Ephesus have uniformly the long torch, those of Laodicea the winged caduceus, &c. The only varieties they present are therefore those of the magistrates' names. Of these the following are unpublished.

42.—Types as above described, but with ΔΙΟΤΡΕΦΟΥΣ
in two lines, between the heads of serpents.

43.—Same as above, but with ΜΙΟΡΑ ΜΥΩΝΙ.

44.—Same, but with ΜΥΤΑ.

Dr. Pinder has given several varieties of what may be called Proconsular Cistophari, struck at Apamea, and bearing the name of the Roman governor of the province. To these, two more may be added.

45.—Types as in Pinder's plate Fig. 26, with LENTVLVS
IMPERATOR above the bow-case, and beneath
it ΚΑΣΤΟΡΟΣ.* Pl. X. 11.

46.—Same as preceding, but above the bow-case PVLCHER·
PROCOS·, and beneath, ΜΥΣΚΟΥ.

Here the local magistrate's name is already well known, and published by Miannet and Dr. Pinder (Pl. I. Fig. 26), but associated with the Roman name of Lentulus Imperator. The occurrence of the same local name in conjunction with two different Roman governors is very rare. A similar instance, however, is found in the case of ΑΠΙCΤΟΚΑΗC, whose name appears on Cistophari struck at Tralles under the praconsulate of Claudius

* There appear indications of a second name under that of Castor, but the letters are all the same from want of space.

Pulcher, and again under C. Fannius.⁹ The name of Pulcher Pro Cos on my coin is distinctly legible, though the letters are very faint; but the letters outside the serpents' heads are not visible, and it is therefore impossible to say whether the coin belongs to C. Pulcher or his brother Appius, who ruled over the province of Cilicia (in which Phrygia was then included) some years later.

It will thus be seen that I have been able to add no less than forty-six unpublished varieties of Cistophori to the catalogue of those given by Dr. Pinder. By far the greater part of these belong to the earlier series of this class of coins; those which are characterized by the absence of dates, and of magistrates' names or initials, instead of which they present varied accessory symbols. A large portion of these are derived from the small "find" of coins of this class to which I have already repeatedly alluded, and which was forwarded to me for inspection and selection by Mr. Lawson, of Smyrna, in 1876. It consisted in all, I believe, of fifty-four coins, all Cistophori, of which there were—

14 of Pergamum

20 of Ephesus

11 of Tralles

6 of Parium

2 of Sardis

1 of Laodicea.

None of these bore a date or the name of a magistrate, and the absence of any coins of Apamea, which are among

⁹ See Pinder, Nos. 187, 190. As the latter is only cited by him from Eckhel, who described it from a bronze coin that had been plated ("anima subacra"—*Sylloge*, Pl. V. Fig. 7), I may mention that I have one perfectly genuine, and in good condition.

the commonest of the whole class, but *all* have magistrates' names, tends further to confirm the separation of the two classes. It appears certain that this little hoard was deposited before the introduction of the second or later description of Cistophori, which in the case of Ephesus—the only one where they are marked by dates—may be fixed at the year B.C. 133. We thus obtain a reasonable assurance that all the varieties included in it belong to the same period, and that this earlier coinage was therefore considerably more varied and extensive than had been before surmised.

It is well known that Professor Mommsen, in his great work on the Roman Coinage, has advanced the opinion that the coinage of Cistophori in Asia began with the creation of the Roman province of that name, and that no such issue could have taken place under the government of the kings of Pergamum.¹⁰ Dr. Pinder also, without expressing his conclusion so positively, appears to incline to the same view.¹¹ But Mr. Head, in examining the sequence of the coins of Ephesus,¹² was led to consider them as divided into two distinct classes (as above indicated), of which he regards the undated coins as preceding those which were marked with dates, and unquestionably belonging to the period of the Roman province, beginning with the epoch of its first establishment. I had long before arrived independently at the same conclusion, in which I should have thought that all numismatists would concur: but the much greater number of varieties which my collection presents, than

¹⁰ Mommsen, "*Histoire de la Monnaie Romaine*," vol. i. pp. 68—67; vol. iii. p. 301.

¹¹ "*Die Cistophoren*," p. 553.

¹² "*Num. Chron.*," N.S., vol. xx.

are found in the British Museum, adds materially to the force of this inference, and renders it at least probable that the coinage in question was spread over a wider space of time than is allowed by Mr. Head. Treating of the coins of Ephesus alone, to which his attention was for the time confined, he considers the undated Cistophori to belong to the interval between 159 and 133 B.C., and suggests that the fifteen or more varieties of them enumerated in his list may very probably be the coinage of the twenty-five years comprised between these dates.¹³ The eight additional varieties which I have given above would very nearly fill up the gap, supposing the symbols to represent annual magistrates, as suggested, with much plausibility, by Mr. Head. But it is extremely improbable that where one small "find" has added seven new varieties—out of twenty coins in all of Ephesus, nine of which had the same symbol—there should not remain many others to be added to our lists, when this class of coins comes to be more diligently collected. And while the conclusion of the period fixed by Mr. Head is established beyond doubt, his initial limit appears to me to rest upon very vague and insufficient arguments, for *evidence* in the true sense of the word there is none. He has apparently adopted the year 159 as being the commencement of a new reign—that of Attalus II. the last of the kings of Pergamum—though he has himself previously suggested the probability that this new system of coinage was originated by Eumenes II., after the fall of Rhodes in B.C. 167. It is true that there exist a few tetradrachms of the Attio standard, with the head of Philetærus, some of which may probably have been struck at Ephesus under

¹³ "Num. Chron.," N.S., vol. xx. p. 146.

the rule of the Attalid kings of Pergamus, but these coins are few in number, and of comparatively rare occurrence,¹⁴ so that it cannot be assumed without further proof that they were the only coinage issued in the long period during which Eumenes II. ruled over a great part of Asia Minor (B.C. 189—159).

Now the fact that coins of the Cistophorus type were struck under the reign of Eumenes II., though perhaps in small numbers, seems to be established beyond a reasonable doubt by the occurrence of the rare coins, of which the following is an unpublished variety.

Obv.—Serpent issuing from the cista mystica, within a wreath of ivy.

Rev.—Two coiled serpents erect, with a bow-case between them; in field above, between the heads of serpents, a thunderbolt; on each side a small human head, looking outwards;¹⁵ beneath ΣΤΡΑ, and within the coils of the serpents the letters ΒΑ ΕΥ. Wt. 194 grs. Pl. X. 12.

A specimen somewhat similar to this is described by Borrell in the "Numismatic Chronicle" (O.S., vol. viii. p. 13,) and is ascribed by him to Thyatira on account of its having the letters ΘΥΑ in the field to the left.

¹⁴ Without attempting to enter on the perplexing subject of the coinage bearing the name of Philetæra, it may be observed that by far the most numerous of the coins of this class are those marked with the letter Α. and with an ivy-leaf; those with the monogram of Eumenes, and with a bee in the field, which are very inferior in style and execution to those of the earlier period, are much less common.

¹⁵ These heads are so minute that it is impossible on my coin to determine their character; but on that in the British Museum it is distinctly seen that the one on the left is a youthful head, probably of Apollo, while that on the right has a long beard.

Another specimen in imperfect condition is described by Dr. Pinder from the Museum at Munich, but without the name of the city, and with ΑΠΟΛ beneath. There is a third specimen in the British Museum (Pl. X. 13), apparently identical with that at Munich, having no name of a city, but ΑΠΟΛ beneath; and being in very good preservation, the letters BA EY are quite distinctly legible, within the serpents, as they are also on the coin in my cabinet.¹⁶ While therefore the evidence of these two additional specimens strongly confirms the doubt expressed by Dr. Pinder as to the attribution of these peculiar coins to Thyatira, they seem to preclude all doubt as to the signification of the letters BA EY, which being thus found upon different varieties, with varied magistrates' names, can scarcely be interpreted otherwise than as the initials of "the king Eumenes." That the letters below the type, ΣΤΡΑ and ΑΠΟΛ, indicate the names of magistrates, rather than those of cities, may, I think, be inferred with little doubt, both from the analogy of their position on the coins with those found on the ordinary Cistophori, and from the improbability that the two coins should present the names of two cities, both otherwise unknown in the series of the Cistophori.¹⁷

It is hardly necessary to observe that the great difficulty in regard to the coinage of the Cistophori arises from the repeated mention of this class of coins among the masses

¹⁶ By the kind permission of Mr. Poole I am enabled to give a figure of the specimen in the Museum by the side of that in my own cabinet, an arrangement which adds materially in the interest of both. (See Pl. X. 18.)

¹⁷ There is, as we shall hereafter see, some reason for connecting Stratonicea with the coinage of Cistophori, but no such probability exists in regard to Apollonia.

of treasure carried in the Roman triumphs, at a much earlier period than we should have supposed from numismatic evidence, that they were current in Asia Minor. Thus we learn from Livy that in the triumph of Aelilius Glahrio, after the defeat of Antiochus the Great, in B.C. 190, no less than 249,000 Cistophori formed part of the booty carried in the procession; in that of Scipio Asiaticus, in the following year (B.C. 189), 331,070, and in that of Æmilius Regillus in the same year, 132,300; while Manlius Vulso, whose arms had been directed only against the Galatians, had borne away 250,000 Cistophori.¹⁸ This repeated testimony, so circumstantial and precise, which is moreover the *only* direct evidence bearing on the subject which we possess, is set aside with amazing coolness by Professor Mommsen, though it is difficult to see any possible mode of explaining away so precise a statement in any satisfactory manner. Nothing in the later books of Livy bears such strong evidence of being derived from authentic, and originally from official records, as these enumerations of the mass of valuable objects which adorned the Roman triumphs; and in all the above passages, the statement of the amount of gold and silver bullion (reckoned of course in pounds weight) is immediately followed by the enumeration of three kinds of coined money: Attic tetradrachms, Cistophori, and the gold Philippei, including of course the gold coins of Alexander the Great, which were at this time so extensively spread through the whole of Asia. Hero, therefore, we distinctly find the term Cistophori used to designate a currency of great extent, as contradistinguished from the tetradrachms of the Attic standard, which would naturally

¹⁸ Liv. xxxvii. c. 46, 58, 59; xxxix. c. 7.

include the silver coinage of Alexander the Great, as well as that of his successors, the kings of Syria and Pergamus. The name is one which could not have come into use until the coins to which it was applied were in extensive circulation, and the type familiar to all, and it seems impossible to believe that the term could ever have been employed to designate any other coinage than that characterized by its peculiar symbols. The coins of Rhodes, for instance, which followed the same standard of weight that was adopted for the Cistophori, might, for commercial purposes, be reckoned as *equivalent* to them; but it is difficult to believe that a sum of Rhodian money should ever have been described as consisting of Cistophori; quite impossible that it should have been so designated before the latter term had come into general and familiar use for the coinage stamped with the "Cistophorus" type.

The difficulty is one of which I for one can see no solution, but it is certainly not to be disposed of in the off-hand way that it has been treated by Professor Mommson. His suggestion that the passages in Livy are derived from some later annalist, who had altered the original statement and introduced the name with which he was familiar, besides its intrinsic improbability, does not meet the difficulty, for it would still leave unexplained the fact that there existed at this early period a vast mass of coinage of a different standard from the Attic; for this is the only reason that can be supposed for the distinct mention of the two classes, and of them only, and we know of no such coinage until the issue of the Cistophori.

In connection with this subject I may perhaps be allowed to call the attention of my readers to a small series of coins, which must have come under the notice of

all collectors of Asiatic Greek coins, and the relation of which to the Cistophorus series has been adverted to by Dr. Pinder.¹⁹ It is well known that the flourishing city of Side, in Pamphylia, continued during a long period to coin tetradrachms of the Attic standard, bearing the characteristic symbol of the city, the fruit of the pomegranate, in the field of the reverse, together with the initial letters of various magistrates' names. The period at which this coinage commenced is unknown,²⁰ but it is certain that it was continued down to the time of Amyntas, King of Galatia, who was a contemporary of Mark Antony, large quantities of the tetradrachms in question, all with the same magistrate's name (ΚΛΕΥΧ), having been included in the same *trouvaille* with the silver pieces exactly similar to them in other respects, but bearing the name of ΒΑΣΙΛΕΥΣ ΑΜΥΝΤΟΥ.²¹ Side, therefore, for some reason unknown to us, was not included among the cities that struck Cistophori; but it is a curious fact that a considerable number of its tetradrachms—of the ordinary type and style—are impressed with countermarks of unusual size and distinctness, the greater part of which contain a bow in its case, together with letters indicating the city where the mark was

¹⁹ "Dis Cistophoren," p. 552.

²⁰ It was, however, certainly subsequent to the time of Alexander the Great; as previously to his conquest Side struck coins with the names of the Persian satraps, Darius and Syennesis, though always with the pomegranate in the field.

²¹ See the account of this remarkable deposit (discovered in 1845) by Mr. Burgon, in the "Numismatic Chronicle," O.S., vol. viii. pp. 82, 98. A much larger number of specimens of both kinds subsequently emerged from the "find" in question than were known to that distinguished numismatist at the time he wrote his paper. See the Sale Catalogue of Borrell's Coins (1852), pp. 30, 41.

affixed, and these names are, in the great majority of cases, those of cities which are well known to have struck Cistophori. Dr. Pinder enumerates ΑΠΑ, ΠΕΡΓΑ, ΣΑΡ, ΤΡΑ, and ΑΔΡΑ.²² Besides these there are in my collection three others, one with ΕΦΕ, the other two with ΣΤΡΑ and ΣΥΝ (both of them perfectly distinct), obviously standing for the names of Stratonicea and Synnada, two cities which are not known to have struck Cistophori, but were in close proximity to cities that did so. They were moreover places of importance and in a flourishing condition during the period when this coinage was in vogue.²³ The countermark of the bow in its case seems almost beyond doubt to connect them with those previously published, as well as with the class of the Cistophori. But two others in my collection, undoubtedly contemporaneous with these, being of precisely similar style and having the same magistrate's name on the reverse, have wholly different countermarks, the one containing a lyre, with the letters ΑΝ,²⁴ the other an owl

²² "Die Cistophoren," p. 552.

²³ It is remarked by Dr. Pinder (p. 540), as it had already been by Pollerlin (tom. ii. p. 29), that the cities which issued Cistophori were almost uniformly the centres of administrative districts, or what the Romans called "Conventus Juridici." This character would apply to Synnada, but not to Stratonicea, which was, however, so important and flourishing a city, that it may well have occupied that position at one time, though in the days of Pliny the conventus had been transferred to the neighboring city of Alabanda (Plin. v. 29, 66, 105, 109).

²⁴ This coin has, besides the countermark on the obverse, that of an anchor on the reverse, but much more faintly impressed, and indistinctly struck; resembling in these respects the countermarks so often found on the tetradrachms with the name of Alexander, and dates in Greek letters, which were probably struck by cities of Pamphylia (see Müller, "Num. d'Alex.," p. 267).

standing, full front, but no letters. The first of these may probably be assigned to Antioch in Caria, though the lyro does not appear on the coins of that city. The other, having no letters, affords no clue to its identification.

All these countermarked coins belong to the earlier period of the coinage of Side, and are very superior in style to the rude coins of the *trouvaille* above mentioned, which bear the name of **KAEYX**. They present but very few varieties of magistrates' initials, and were probably all struck within a short period. The occasion and date when this remarkable series of countermarks was affixed at a number of different cities are wholly unknown, but there can be little doubt, as suggested by Dr. Pinder, that it was for the purpose of giving them currency at a recognised rate of exchange, in connection with the Cistophori that had at this period so large a circulation in Asia.

E. H. BUNBURY.

XVII.

CATALOGUE OF THE COLLECTION OF MOHAMMADAN COINS

BELONGING TO E. T. ROGERS BEY.

PART I.—THE COINS OF THE EASTERN KHALIFES.

THE Collection of Oriental Coins belonging to Rogers Bey is especially rich in certain branches. The long series of the issues of the Eastern Khalifehs, and the coins of the various Mohammadan dynasties that governed Egypt from the Bény Tûlûn to the Turkish conquest, form the strongest sections of the collection, and it has been suggested that a brief catalogue of these portions of Rogers Bey's cabinet would be of some service to Oriental numismatists. It is certainly the duty of the fortunate possessor of a fine collection of coins to "bring forth from his treasury" at least the new things, and when Rogers Bey entrusted to me the presentation to the Society of the concise catalogue he had himself drawn up, and for the accuracy of which he is personally responsible, I thought that the list would be most useful if published in its entirety, and therefore restricted my share of the work to the task of correcting the proof-sheets.

The present instalment contains the coins of the two dynasties of the Eastern Khalifehs, the Amawis or "Omniades" of Damascus, and the Abbâsis of Baghdâd. In a future part we hope to offer the Society the description of Rogers Bey's magnificent series of Fâtimy coins and the other Egyptian dynasties. A few rarities among various other dynasties will form a supplement.

S. L.-P.

I.

KHALIFS OF THE RACE OF BENI-UMAYYEH.

		Began to reign.
معاوية بن أبي سفيان	1. Mu'awiah	A.H. 41
يزيد بن معاوية	2. Yezid ibn Mu'awiah	60
معاوية بن يزيد	3. Mu'awiah ibn Yezid	64
مروان بن الحكم	4. Marwân ibn al-Hakam	64
عبد الملك بن مروان	5. 'Abd-al-Malik ibn Marwân	65
الوليد بن عبد الملك	6. Weliid ibn 'Abd-al-Malik	86
سليمان بن عبد الملك	7. Suleimân ibn 'Abd-al-Malik	'96
عمر بن عبد العزيز	8. 'Umar ibn 'Abd-al-'Aziz	99
يزيد بن عبد الملك	9. Yezid ibn 'Abd-al-Malik	101
هشام بن عبد الملك	10. Hishâm ibn 'Abd-al-Malik	105
الوليد بن يزيد	11. Weliid ibn Yezid	125
يزيد بن الوليد	12. Yezid ibn Weliid	126
ابراهيم بن الوليد	13. Ibrahim ibn Weliid	126
مروان بن محمد	14. Marwân ibn Muhammad	127
		to 132

COPPER.

I.—Copper coins struck before the monetary reform attributed to the Khalif 'Abd-al-Malik ibn Marwân.

1, 2. *Obv.* Bust of Byzantine type, facing, crowned, on the diadem a cross; in the right band an orb surmounted by a cross. To the right بحمص *at Hims = Emesa*; to the left KAAON *good*.

Rev. The letter M surmounted by a star and two circles. In the margin, IMEHC. Below, طيب *good*.

3. *Obv.* Two figures standing, each holding in right hand a sceptre surmounted by a cross. Between them محمد رسول الله

Muhammad is the apostle of God. In margin, لا اله الا الله وحده *There is no deity but God alone, He has no associate.*

Rev. A cross erect on three steps, on each side of it a star. Margin same as that on obverse.

4, 5. *Obv.* Half figure of Byzantine type, facing, surmounted by a cross; the right hand raised holds a lance; in the left hand an orb surmounted by a cross or a fleur-de-lis. To the left بسم الله *In the name of God.* To the right ٠٠٨.

Rev. The letter M, above it a cross; in margin IMEHC; below طيب *good.*

6. *Obv.* Standing figure facing, head with long hair and surrounded by nimbus, from left side hangs a sword; in the margin محمد رسول الله.

Rev. The letter M; in the margin ايليا فلسطين *Elia, Palestine.*

7. *Obv.* Half figure, head facing to front and with long hair. In margin, لا اله الا الله *There is no deity but God.*

Rev. Effaced.

8. *Obv.* Standing figure wearing long robe, right hand raised to breast, left hand holds scabbard of sword hanging from girdle. In the margin لعبد الله عبد الملك امير المؤمنين *By the servant of God 'Abd-al-Malik, commander of the faithful.*

Rev. A cross the head of which is Φ erected on four steps. To the right بقنسرين *at Kinsarin*, to the left وافي *good weight.* In the margin لا اله الا الله وحده محمد رسول الله *There is no deity but God, alone, Muhammad is the apostle of God.*

II.—Copper coins with religious sentences only.

9-23. *Obv.* In three lines لا اله الا الله وحده *There is no deity but God alone.*

Rev. Within a circle of beads محمد رسول الله *Muhammad is the apostle of God.*

24. Similar to 9, but *rev.* inscription written backwards by an error of the engraver.

25, 26. The same inscriptions as on 9, but also on each side a marginal inscription, which is illegible.

27-36. Like 9 with slight variations of detail.

37. Like 9, but the characters finer.

38. The same legends as 9, but in a square.

39-43. The same inscriptions, with varieties of detail.

44. The same inscriptions in the field, and in the margin
 ارسله بالهدى ودين الحق ليظهره على الدين كله *He sent him with direction and the true religion that he might extol it above all other religions.*

45, 46. *Obv.* In three lines; لا اله الا الله وحده لا شريك له. *Muhammad is the Apostle of God, He sent him with direction and the true religion.*

Rev. In three lines, محمد رسول الله *Muhammad is the Apostle of God.* Margin, ارسله بالهدى ودين الحق *He sent him with direction and the true religion.*


III.—Coins with floral or other ornaments.

47. The same legends as on 27, but above the word الله is a crescent, thus الله.

48-59. *Obv.* بسم الله لا اله الا الله وحده لا شريك له. *In the name of God, there is no deity but God alone, he has no associate.*

Rev. In a circle, a star with six rays. Margin, محمد رسول الله *Muhammad is the apostle of God.*


60. *Obv.* In three lines لا اله الا الله وحده.


Rev. In three lines محمد رسول الله but between the و and the ل of the word رسول appears an ornament like the almond blossom on the Israelitish shekels 

61. *Obv.* Like that of 60.

Rev. In the centre a little ornament and the margin is written in a triangular form, thus




62, 63. The same legends as on 60, but on the reverse, to the right is a palm branch with three leaves  on each side.


64, 65. Within a double circle *بسم الله لا اله الا الله وحده* and below *  * a leaf or bud and a six-rayed star on each side.

Rev. Within a circle *محمد رسول الله*. Margin illegible.

66, 67. *Obv.* Like 60.


Rev. Within a circle the same inscription as on 60, but to the right a palm branch with two leaves  on each side.

68. Like 66, but palm branch with three leaves on the left.

69. Like 66, but a palm branch with four leaves on each side  on the right.

70-72. *Obv.* In three lines within a circle *لا اله الا الله وحده*.

Rev. Within a circle in three lines *محمد رسول الله*. Margin, *بسم الله ضرب هذا الفلّس واني* *In the name of God, this felse is struck full weight.*

73. *Obv.* Within a circle *لا شريك له* *He has no associate*; below, a palm branch with two leaves on each side and two six-rayed stars *  *. Margin, indistinct, but probably *لا اله الا الله وحده*.

IV.—Copper coins with Mints.

74. *Obv.* Within a circle in three lines, *لا اله الا الله وحده*. *There is no deity but God alone*, and beneath a star *.

Rev. In three lines *محمد رسول الله* *Muhammad is the apostle of God*. Margin, *بسم الله ضرب هذا الفلّس بالاردن* *In the name of God, this felse was struck in al-Ardun* i.e. the Jordan.

75-81. *Obv.* In three lines, لا اله الا الله بعلبك *There is no deity but God. Ba'albekk.*

Rev. محمد رسول الله. On each side a double circle in margin and four annulets.

82. *Obv.* In three lines لا اله الا الله وحده.

Rev. In three lines, محمد رسول الله. Margin, بسم الله ضرب *In the name of God, this fela was struck in . . .*

83, 84. *Obv.* In a circle, القسطاط *Al Fusṭāṭ.* Margin على يدى *By the hands of the Amir 'Abd-al-Malik ibn-Marwān.*

Rev. In a circle مصر *Miṣr.* Margin, بامر عبد الله مروان امير *By order of the servant of God, Marwān, commander of the faithful.*

85. *Obv.* Within a circle مصر *Miṣr,* and three obscure characters. Margin, على يدى الامير عبد الملك ابن مروان *By the hands of the Amir 'Abd-al-Malik ibn-Marwān.*

Rev. Illegible.

86-89. *Obv.* Like that of 60.

Rev. ضرب هذا الفلّس بدمشق *This fela was struck in Damascus.*

90-93. *Obv.* Like that of 60.

Rev. بسم الله ضرب هذا الفلّس بطبرية *In the name of God, this fela was struck in Ṭabariyah, i.e. Tiberias.*

V.—Copper coins with names of Princes.

94. *Obv.* . . . على يدى عيسى ابن *By the hands of 'Isa-ibn . . .*

95. *Obv.* In three lines, بسم الله لا اله الا الله وحده. Margin, مما امر به الامير . . . بن يزيد *By order of the Amir . . . ibn Yazid.*

Rev. In three lines, محمد رسول الله. Margin, ضرب هذا . . . مائة *This fela was struck . . . hundred.*

96-99. *Obv.* In a square وحدہ alone. Margin, لا اله الا الله *There is no deity but God.*

Rev. Like 95. Margin, بامر الامير هشام ابن عمر *By order of the Amir Hishām ibn 'Umar.*

100. Like 70.

VI.—Copper coins with pious legends, mints and dates.

101. *Obv.* لا اله الا الله وحده لا شريك له within a double circle with three annulets.

Rev. In three lines, بسم الله ضرب محمد رسول الله. Margin, بسم الله ضرب *In the name of God this fels was struck in Wdsif in the year 116.*

102. *Obv.* Like that of 101, but with five annulets in the margin.

Rev. Like that of 101, but the margin, بسم الله ضرب هذا *In the name of God this fels was struck in Wdsif in the year 123.*

103. *Obv.*

Rev. In field four lines:

بسم الله	In the name of God
ضرب هذا	This fels was struck
الفلس سنة	in the year
ثلاثين ومائة	130.

104-109 are indistinct varieties.

GOLD.

Dindre of the Beni-Umayyeh.

No.	Date A.H.	Description.	Weight grammes.
110	77	Obv. : in the field, لا اله الا <i>There is no deity but</i> الله وحده <i>God, alone,</i> لا شريك له <i>He has no associate.</i> Margin : محمد رسول الله ارسله بالهدى ودين الحق ليظهره على الدين كله <i>Muhammad is the Apostle</i> <i>of God, He sent him with direction and the true</i> <i>religion, to extol it above all other religions.</i> Rev. : field, الله احد الله <i>God is one, God is</i> الضمد لم يلد <i>everlasting, He begets not,</i> ولم يولد <i>nor is He begotten.</i> Margin : بسم الله ضرب هذا الدينار في سنة سبع وسبعين <i>In the name of God, this dīnār was struck in</i> <i>the year 77.</i>	4.27
111	78	Same في سنة ثمان وسبعين	4.27
112	79	في سنة تسع وسبعين	4.27
113	80	في سنة ثمانين	4.25
114	81	سنة احدى وثمانين	4.25
115	82	سنة اثنتين وثمانين	4.17
116	83	سنة ثلاث وثمانين	4.30
117	84	سنة اربع وثمانين	4.30
118	85	سنة خمس وثمانين	4.27

No.	Date A.H.	Description.	Weight grammes.
119	86	Same سنة ست وثمانين	4.27
120	87	„ سنة سبع وثمانين	4.27
121	88	„ سنة ثمان وثمانين	4.27
122	89	„ سنة تسع وثمانين	4.28
123	90	„ سنة تسعين	4.26
124	91	„ سنة إحدى وتسعين	4.27
125	92	„ سنة اثنتين وتسعين	4.27
126	92	Half dinâr Obv. : field, لا اله الا الله There is no god but God وحده alone. Margin : محمد رسول الله ارسله بالهدى ودين الحق <i>Muhammad is the apostle of God, He sent him with direction and the true religion.</i> Rev. : field, بسم الله In the name of God, الرحمن the merciful, الرحيم the compassionate. Margin : ضرب هذا النصف سنة ثنين وتسعين <i>This nisf was struck in the year 92.</i>	2.13
127	93	Like 110 سنة ثلث وتسعين	3.85
128	94	„ سنة أربع وتسعين	4.28
129	94	Third of a dinâr, Inscriptions like those on No. 126 except reverse margin ضرب هذا الثلث سنة أربع وتسعين <i>This third was struck in the year 94.</i>	1.42

No.	Date A.H.	Description.	Weight grammes.
130	95	Liko 110 سنة خمس وتسعين	4.28
131	96	„ سنة ست وتسعين	4.25
132	96	Half dinâr, like 128 سنة ست وتسعين	2.10
133	96	Third of a dinâr, like 129 سنة ست وتسعين	
134	97	Liko 110 سنة سبع وتسعين	4.26
135	97	Third of a dinâr, like 129 سنة سبع وتسعين	
136	98	Liko 110 سنة ثمان وتسعين	4.29
137	99	„ سنة تسع وتسعين	4.24
138	99	Third of a dinâr, like 129 سنة تسع وتسعين	1.42
139	100	Liko 110 سنة مئة	4.26
140	100	Half dinâr, like 126 سنة مئة	2.14
141	100	Third of a dinâr, like 129 سنة مئة	
142	101	Liko 110 سنة احدى ومئة	
143	102	„ سنة ثنتين ومئة	4.24
144	103	Liko 110 سنة ثلاث ومئة	4.25
145	103	Third of a dinâr, like 129 سنة ثلاث ومئة	
146	104	Liko 110 سنة اربع ومئة	4 12
147	105	„ سنة خمس ومئة	4.24
148	106	„ سنة ست ومئة	4.26
149	107	„ سنة سبع ومئة	4.14
150	108	„ سنة ثمان ومئة	4.25
151	109	„ سنة تسع ومئة	4.23
152	110	„ سنة عشرة ومئة	4.25
153	111	„ سنة احدى عشرة ومئة	4.26
154	112	„ سنة اثني عشرة ومئة	4.26
155	113	„ سنة ثلاث عشرة ومئة	4.22
156	114	„ سنة اربع عشرة ومئة	4.08

No.	Date A.H.	Description.	Weight grammes.
157	115	Like 110 سنة خمس عشرة ومئة	4.26
158	116	„ سنة ست عشرة ومئة	4.23
159	117	„ سنة سبع عشرة ومئة	4.26
160	118	„ سنة ثمان عشرة ومئة	4.26
161	119	„ سنة تسع عشرة ومئة	3.92
162	120	„ سنة عشرين ومئة	4.25
163	121	„ سنة احدى وعشرين ومئة	4.23
164	122	„ سنة اثنين وعشرين ومئة	4.26
165	123	„ سنة ثلاث وعشرين ومئة	4.26
166	124	„ سنة اربع وعشرين ومئة	4.25
167	125	„ سنة خمس وعشرين ومئة	4.05
168	126	„ سنة ست وعشرين ومئة	4.26
169	127	[The only date wanting.]	
170	128	Like 110 سنة ثمان وعشرين ومئة	4.45
171	129	„ سنة تسع وعشرين ومئة	4.26
172	130	„ سنة ثلاثين ومئة	4.27
173	131	„ سنة احدى وثلاثين ومئة	4.25
174	132	„ سنة اثنين وثلاثين ومئة	4.25

SILVER.

Dirhems of the Beni-Umayyeh.

The earliest dirhem in this collection bears the date 79. And although the place of its mintage is not mentioned on the coin, the style of the engraving proves it to emanate from the mint of Damascus.

On the dinârs the date is found in the margin, of the reverse, whilst on the dirhems it is found in that of the obverse.

No.	Date A. H.	Place of Mintage.	Description.	Weight grammes.
175	79	—	<p><i>Obv.: area:</i> لا اله الا الله <i>There is no deity but God alone,</i> لا شريك له <i>He has no associate.</i> <i>Margin:</i> بسم الله ضرب هذا الدرهم في سنة تسع وسبعين <i>In the name of God, this dirhem was struck in the year 79.</i> 5 annulets in margin.</p> <p><i>Rev.: area:</i> الله احد الله <i>God is one, God is eternal, He begets not neither</i> الصمد لم يلد <i>is He begotten,</i> لم يولد ولم يكن <i>nor is any equal</i> له كفوا احد <i>to Him.</i> <i>Margin:</i> محمد رسول الله ارسله بالهدى ودينه الحق ليظهره على الدين كله ولو كره المشركون <i>Muhammad is the Apostle of God, He sent him with direction and the true religion, to extol it above other religions notwithstanding the aversion of polytheists.</i></p>	2.73

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
176	105	Azarbaijân أذربيجان	The dirbems of this dynasty are remarkably uniform, following the type above described; I shall only refer to deviations from that type. The above coin, No. 175, has 5 small annulets in the margin of each side, and this is the most usual number.	2.85
177	90	Ardeshir Khurrah اردشیر خرة		2.57
178	97	"		2.82
179	103	Armenia أرمينية		2.92
180	91	Istakhr استخر		2.82
181	92	"		2.86
182	94	"		2.80
183	95	"		2.78
184	96	"		2.88
185	98	"		
186	112	Afriktyeh أفريقية	On obv. 4 annulets ☉ and 5 on rev.	2.93
187	120	Al-Bâb الباب	On obv. 4 annulets ☉ and 5 on rev.	2.88
188	81	Al-Basrah البصرة		2.52
189	81	"		2.30
190	82	"		2.85
191	100	"		
192	101	"		2.86
193	90	Bihkubad-al-asfal بهقباد الأسفل		2.63
194	96	AtTeimerab التيمرة		2.55
195	97	"		2.60
196	128	Al-Jezireh الجزيرة	The 5 annulets are rather larger ○.	2.87
197	92	Jayy جى		2.43
198	94	"		2.30
199	80	Al-Jisr? الجسر		2.76

No.	Date A.H.	Place of Mintage.	Description.	Weight Grammes.
200	91	Darabjard در بجرد		2.76
201	92	"		2.45
202	95	"		2.80
203	96	"		2.81
204	99	Destawa دستوا		2.67
205	79	Dimashk ديمشق		2.45
206	80	"		2.91
207	81	"		2.38
208	82	"		2.85
209	83	"		2.66
210	84	"		
211	86	"		2.92
212	87	"		2.67
213	88	"		2.65
214	89	"		2.80
215	90	"		2.75
216	91	"		2.90
217	92	"		2.41
218	93	"		2.85
219	94	"		2.85
220	"	"		
221	95	"		2.75
222	96	"		2.55
223	97	"		2.85
224	98	"		2.91
225	99	"		2.81
226	100	"		2.86
227	101	"		2.78
228	102	"		2.82
229	103	"		2.84
230	104	"		2.61
231	108	"		2.72
232	113	"		2.58
233	117	"		2.87
234	118	"		2.55
235	123	"		2.89
236	127	"		2.87
237	128	"		2.91
238	80	Râmhornuz رامهرمز		2.46

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
239	96	Ar-Rayy الرى		2.77
240	131	As-Samiyeh السامية	On obv. 5 double annulets ○○, and on rev. 5 single annulets o.	2.90
241	91	Sâbûr سابور		2.80
242	92	"		2.65
243	93	"		2.93
244	98	"		2.88
245	90	Sijistân سجستان		2.85
246	97	"		2.84
247	98	Surraḡ سرق		2.50
248	90	Sûḡ-al-Ahwâz سوق الاهواز		2.62
249	98	"		2.93
250	95	Al-Furât الفرات		2.55
251	90	Kermân کرمان		1.89
252	91	"		2.83
253	93	"		2.73
254	94	"		2.85
255	100	"		2.73
258	101	Al-Kûfah الكوفة		2.85
257	97	Mâhy ماهي		2.76
258	98	"		2.82
259	108	Al-Mubarakah المباركة	On obv. 3 annulets ⊙, and on rev. 3 smaller ones.	2.53
260	117	"	On obv. 3 annulets ⊙, and 5 on rev.	2.82
281	119	"	On obv. 3 annulets ⊙, alterna- ting with three sets of 3 dots thus ∴. On rev. 6 annulets.	2.96
262	90	Merv مرو		2.36
263	91	"		2.47
264	93	"		2.43
265	95	"		2.60
266	99	"		2.80
267	110	"	Obv. 4 sets of dots ∴. rev. 5 annulets.	2.90
268	94	Manâzir مناذر		2.64

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
269	93	Nahr Tira نهر تيرى		2.30
270	85	Wâsiṭ واسط		2.33
271	86	"		2.79
272	"	"		
273	87	"		2.32
274	89	"		2.92
275	"	"		
276	"	"		
277	"	"		
278	"	"		
279	90	"		2.89
280	91	"		2.75
281	"	"		
282	92	"		2.86
283	"	"		
284	"	"		
285	93	"		2.86
286	"	"		
287	"	"		
288	94	"		2.72
289	"	"		
290	"	"		
291	"	"		
292	"	"		
293	95	"		2.86
294	"	"		
295	"	"		
296	"	"		
297	"	"		
298	"	"		
299	96	"		2.87
300	"	"		
301	"	"		
302	97	"		
303	99	"	One of the 5 annulets is double thus oo.	2.55
304	103	"	Obv. 4 double annulets oo.	2.92
305	104	"	Obv. 4 double annulets oo.	2.55
306	105	"	Obv. 4 double annulets oo.	2.87
307	106	"	Obv. 3 double annulets oo.	2.93
308	107	"	Obv. 3 large annulets @.	2.95
309	"	"	Obv. 3 large annulets @.	2.80

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
310	107	Wāsit واسط	Obv. 3 large annulets ☉.	
311	"	"	"	
312	"	"	"	
313	108	"	"	2.61
314	"	"	"	
315	109	"	"	2.92
316	110	"	"	2.87
317	"	"	"	
318	"	"	"	
319	111	"	"	2.87
320	112	"	"	2.88
321	113	"	"	2.92
322	114	"	"	2.92
323	115	"	"	2.92
324	116	"	"	2.89
325	"	"	"	
326	117	"	"	2.90
327	118	"	"	2.87
328	"	"	"	
329	"	"	"	
330	119	"	"	2.70
331	120	"	Obv. 5 large annulets ☉.	2.85
332	121	"	"	
333	122	"	"	2.80
334	"	"	"	
335	123	"	"	2.90
336	"	"	"	
337	124	"	On obv. 5 large annulets, on rev. 5 small.	2.90
338	125	"	"	2.89
339	"	"	"	
340	"	"	"	
341	"	"	"	
342	"	"	"	
343	126 *	"	"	2.81
344	" *	"	On obv. 4 large annulets.	2.74
345	" *	"	On obv. 7 large annulets.	2.85

* These three dirhems, struck in the same year and in the same town are from three different dies. They have respectively 5, 4 and 7 annulets on their obverse margins, and as three successive Khalifs reigned during the year, it seems reasonable to attribute a different dirhem to each Khalif.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
346	126	Wâsiṭ واسط	On obv. 7 large annulets	.
347	127	"	"	2.71
348	128	"	"	2.90
349	129	"	"	2.81
350	130	"	"	2.87
351	131	"	"	2.89
352	90	Herât هرات	Obv. and rev. 5 small annulets.	
353	91	"	"	

Ahu-Muslim. أبو مسلم

The celebrated general to whom this next dirhem is attributed raised the standard of revolt and for several years waged war against the Khalifs of the dynasty of Beni-Umayyeb.

This dirhem bears the same legends as those of the Beni-Umayyoh already described; and in addition another verse of the Kuran, which appears around the area of the obverse, within the marginal legend.

Dynastic No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
1	128	Jayy جى	<p>Obv.: area as on 175, but around it, this verse: لا اسئلكم عليه احزا الا المودة فى القربى <i>I ask of you no reward for it except love towards relations.</i> Margin: the words all separated by annulets: بسم الله ضرب بجى سنة ثمان وعشرين ومئة <i>In the name of God, struck in Jayy the year 128.</i> Rev.: as on 175, but no annulets visible.</p>	

DYNASTY OF 'ABBÂSY KHALIFS.

		A. H.
أبو العباس عبد الله السفاح	1 Abu-l-'Abbâs Abdallah, as-Saffâh.	132
أبو جعفر عبد الله المنصور	2 Abu-Ja'far 'Abdallah, al-Manşûr.	136
أبو عبد الله محمد المهدي	3 Abu-'Abdallah, al-Mahdy.	158
موسى الهادي	4 Mûsa, al-Hâdy.	169
أبو جعفر هارون الرشيد	5 Abu-Ja'far Hârûn, ar-Rasbîd.	170
أبو موسى محمد الأمين	6 Abu-Mûsa Muḥammad, al-Amin.	193
أبو جعفر عبد الله المأمون	7 Abu-Ja'far 'Abdallah, al-Mamûn.	—8
أبو اسحاق محمد المعتصم بالله	8 Abu-Ishâk Muḥammad, al-Mutaşim-billah.	195
أبو جعفر هارون الواثق بالله	9 Abu-Ja'far Hârûn al-Wâthiq-billah.	218
أبو الفضل جعفر المتوكل على الله	10 Abu-l-Faql Ja'far, al-Mutawakkil-'ala-llah.	227
أبو جعفر محمد المنتصر بالله	11 Abu-Ja'far Muḥammad, al-Muntaşir-billah.	232
أبو العباس أحمد المستعين بالله	12 Abu-l-'Abbâs Aḥmad, al-Musta'in-billah.	247
أبو عبد الله محمد المعتز بالله	13 Abu-'Abdallah Muḥammad, al-Mu'tazz-billah.	248
أبو اسحاق محمد المهتدي بالله	14 Abu Ishâk Muḥammad, al-Muhtady-billah.	251
أبو العباس أحمد المعتد على الله	15 Abu-l-'Abbâs Aḥmad, al-Mu'tamid-'ala-llah.	255
أبو العباس أحمد المعتضد بالله	16 Abu-l-'Abbâs Aḥmed, al-Mu'taḍid-billah.	256
أبو محمد علي المكتفي بالله	17 Abu-Muḥammad 'Aly, al-Muktafy-billah.	279
أبو الفضل جعفر المقتدر بالله	18 Abu-l-Faql Ja'far, al-Muktadir-billah.	289
أبو منصور محمد القاهر بالله	19 Abu-Manşûr Muḥammad, al-Kâbir-billah.	295
أبو العباس أحمد الرازي بالله	20 Abu-l-'Abbâs Aḥmad, ar-Râdy-billah.	320
أبو اسحاق إبراهيم المتقي لله	21 Abu-Ishâk Ibrahim, al-Muttaqy-lillah.	322
أبو القاسم عبد الله المستكفي بالله	22 Abu-l-Kâsim 'Abdallah, al-Mustakfy-billah.	329
		333

ARRÂSY KHALIFS—continued.

		A.H.
أبو القاسم الفضل المطيع لله	23 Abu-l-Kâsim al-Faql, al Muql ⁱ -lillah.	334
أبو الفضل عبد الكريم الطايح لله	24 Abu-l-Faql 'Abd-al-Karim, Aṭ-Taḥ ⁱ -lillah.	363
أبو العباس أحمد القادر بالله	25 Abu-l-'Abbâs Aḥmad, al-Kâdir-billah.	381
أبو جعفر عبد الله القايم بأمر الله	26 Abu-Ja'far 'Abdallah, al-Kâim-bi-amri-llah.	422
عبد الله المقتدى بأمر الله	27 'Abdallah, al-Muḳtady bi-amri-llah.	467
أبو العباس أحمد المتظهر بالله	28 Abu-l-'Abbâs Aḥmad, al-Mustazhir-billah.	487
أبو منصور الفضل المسترشد بالله	29 Abu-Manṣûr al-Faql, al-Mustarshid-billah.	512
أبو جعفر المنصور الراشد بالله	30 Abu-Ja'far al-Manṣûr, ar-Râshid-billah.	529
أبو عبد الله محمد المقتفى لأمر الله	31 Abu-'Abdallah Muḥammad, al-Muktaf-y-li-amri-llah.	530
يوسف المستنجد بالله	32 Yûsuf, al-Mustanjid-billah	555
أبو محمد الحسن المستضى بأمر الله	33 Abu-Muḥammad al-Ḥasan, al-Mustaḍy-bi-amri-llah.	566
أبو العباس أحمد الناصر لدين الله	34 Abu-l-'Abbâs Aḥmad, an-Nâsir-li-dîni-llah.	575
أبو نصر محمد الظاهر بأمر الله	35 Abu-Naṣr Muḥammad, aḡ-Zâhir-bi-amri-llah.	622
أبو جعفر المنصور المستنصر بالله	36 Abu-Ja'far al-Manṣûr, al-Mustansir-billah.	623
أبو أحمد عبد الله المستعصم بالله	37 Abu-Aḥmad 'Abdallah, al-Musta'sim-billah.	640
	who died in	656

I.—GOLD.

DÎNÂRS OF THE DYNASTY OF THE 'ABBÂSY KHALÎFS.

السَّاقِ 1st Khalif, *As-Saffâh*, 132–136.

No.	Date A.H.	Description.	Weight grammes.
1	133	<p>The dînars of this dynasty are for the first few Khalîfs so nearly alike that one description will suffice: departures from that type will be noticed in subsequent descriptions.</p> <p>Obv. area,</p> <p>لا اله الا الله <i>There is no deity but God alone,</i> الله وحده <i>He has no associate.</i></p> <p>Margin : محمد رسول الله ارسله بالهدى ودين الحق ليظهره على الدين كله <i>Muhammad is the apostle of God, He sent him with direction and the true religion, to extol it above all other religions.</i></p> <p>Rev. area,</p> <p>محمد <i>Muhammad</i> رسول <i>is the apostle</i> الله <i>of God.</i></p> <p>Margin : بسم الله ضرب هذا الدينار سنة ثلث وثلثين ومئة <i>In the name of God this dînar was struck in the year 133.</i></p>	4.27
2	134	somewhat abraded.	4.15
3	135	pierced.	4.19

المنصور 2nd Khalif, *Al-Manşûr*, 136–158.

4	137		4.15
5	138	clipped.	3.85
6	139		4.23
7	"	on rev. ∴	4.25
8	140		4.20
9	143		
10	144		4.25

2nd Khalif—*continued*.

No.	Date A.H.	Description.	Weight grammes.
11	145		4.26
12	146		4.18
13	147		4.25
14	148		4.25
15	"		4.15
16	150		
17	151		4.25
18	152		4.05
19	154		4.22
20	155		4.23
21	156		4.10
22	157		4.11

المہدی 3rd Khalif, *Al-Mahdy*, 158—169.

23	158		4.23
24	159		4.26
25	160		4.13
28	161		3.82
27	"	on rev. .	4.12
28	162		4.15
29	"	on rev. •	4.18
30	163		4.18
31	165		4.22
32	"	on rev. •	4.12
33	186		4.10
34	"	on rev. •	4.26
35	167		4.00
36	"	A point beneath ب of سبع.	4.22
37	168		4.24

الہادی 4th Khalif, *Al-Hâdy*, 169—170.

38	169	Beneath rev. area ::	4.11
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الرشید 5th Khalif, *Ar-Rashîd*, 170—193.

39	170	Beneath rev. area على 'Aly, for 'Aly ibn Suleimân, governor of Egypt.	4.22
40	171	Beneath rev. area, the letter د.	4.25

5th Khalif—continued.

No.	Date A.H.	Description.	Weight grammes.
41	171	Beneath rev. area موسى <i>Mûsa</i> , for Mûsa ibn 'Isa, governor of Egypt.	4.25
42	172	clipped.	4.05
43	"	Like 41.	
44	"	Beneath rev. area عمر <i>'Umar</i> for 'Umar ibn Ghilân, governor of Egypt.	4.10
45	173	Liko 44.	
46	174		
47	"	Beneath rev. area داود <i>Daûd</i> , for Daûd ibn Yazid, governor of Egypt.	
48	175		
49	"	Like 44.	
50	176	Beneath rev. area إبراهيم <i>Ibrahîm</i> for Ibrahîm ibn Sâlih, governor of Egypt: clipped and abraded.	
51	"	Beneath rev. area جعفر <i>Ja'far</i> , for Ja'far ibn Yahya al-Barmaky, governor of Egypt. He retained the post for many years but was represented by lieutenant governors (See Abu-l-Mahâsin, vol. i. p. 477).	
52	177		4.15
53	"	Like 51 جعفر <i>Ja'far</i> .	4.21
54	178	" "	4.21
55	179	" "	4.25
56	180	" "	4.25
57	181	" "	4.18
58	182	" "	4.21
59	"	On the rev., a second circular legend within the margin, ما امر به الامير الامين محمد <i>By order of the Amir Al-Amin Muḥammed son of the Commander of the Faithful.</i>	3.77
60	183	Like 51 جعفر <i>Ja'far</i> .	4.22
61	184	Like 59.	4.06
62	"	Like 51 جعفر <i>Ja'far</i> .	4.20
63	185	Like 59.	4.30
64	"	Like 51 جعفر <i>Ja'far</i> .	4.25

5th Khalif—continued.

No.	Date A.H.	Description.	Weight grammes.
65	186	Like 59.	4.11
66	„	Like 51 جعفر <i>Ja'far</i> .	3.90
67	187	Beneath rev. area, خالد <i>Khalid</i> .	3.78
68	188		4.18
69	189	Beneath rev. area الخليفة <i>Al-Khalifah</i> .	4.20
70	190	Like 69 الخليفة <i>Al-Khalifah</i> .	4.12
71	„	Like 40, د.	4.20
72	191	Beneath rev. area the letter ر.	4.10
73	„	Like 69 الخليفة <i>Al-Khalifah</i> .	4.12
74	192	„ „	4.20
75	„	Like 40 د.	4.20
76	193	Like 69 الخليفة <i>Al-Khalifah</i> .	4.17
77	„	Like 40 د.	

6th Khalif, *Al-Amin*, 193—198.

78	194	Like 69 الخليفة <i>Al-Khalifah</i> .	4.23
79	195	Above rev. area الخليفة <i>Al-Khalifah</i> , beneath rev. area الامين <i>Al-Amin</i> .	4.15
80	197	Above rev. area ربى الله <i>My Lord is God</i> , beneath rev. area الامين <i>Al-Amin</i> .	4.13
81	198		4.19

7th Khalif, *Al-Mamun*, 196—218.

82	196	Beneath obv. area عباد <i>'Abbad</i> , for <i>'Abbad</i> ibn Muhammad, governor of Egypt. Above rev. area الخليفة <i>Al-Khalifah</i> , beneath rev. area المامون <i>Al-Mamun</i> .	4.22
83	197	Like 82.	4.25
84	198	„	4.23

7th Khalif—continued.

No.	Date A.H.	Description.	Weight grammes.
85	198	Beneath obv. area المطلب <i>Al-Muṭṭalib</i> , for Al-Muṭṭalib ibn 'Abdallah, governor of Egypt. Above rev. area الإمام <i>Al-Imam</i> , beneath rev. area المامون <i>Al-Mamûn</i> .	4.33
86	„	Beneath obv. area العباس <i>Al-'Abbâs</i> , for Al-'Abbâs ibn Mûsa, governor of Egypt. A point over the ن of the unit of date ثمان . Rev. like 85.	4.28
87	„	Beneath obv. area مدينة السلام <i>Medinet-as-Salâm</i> . This is the first instance of the place of mintage being found on a gold coin. Margin: بسم الله الرحمن الرحيم ضرب هذا الدينار سنة ثمان وتسعين ومئة <i>In the name of God the most merciful the most compassionate, this dinâr was struck in the year 198.</i> Above rev. area لله <i>lillâh</i> , to God, beneath rev. area ذو الرياستين <i>Zû-r-riḡsatein</i> , chief of two administrations, in reference to Faql ibn Saḡel. ٥.	4.00
88	199	Beneath obv. area لمطلب <i>Al-Muṭṭalib</i> without the l. Above rev. area ذو الرياستين <i>Zu-r-riḡsatein</i> . Beneath rev. area الفضل <i>Al-Faql</i> . Margin: بسم الله ضرب هذا الدينار بمصر سنة تسع وتسعين ومئة <i>In the name of God, this dinâr was struck in Miṣr, the year 199.</i>	4.28
89	„	Beneath obv. area العراق <i>Al-'Irâq</i> . Rev. like 87.	4.16
90	200	Like 88.	4.12
91	„	Rev. like 87.	4.22

7th Khalif—continued.

No.	Date A.H.	Description.	Weight grammes.
92	200	Beneath obv. area <i>As-Sirry</i> , for <i>As-Sirry ibn al-Ḥakam</i> , governor of Egypt. Above rev. area <i>الله طاهر To God, Ṭāhir</i> . Below rev. area <i>ذو اليمينين Ambidexter</i> , for <i>Ṭāhir ibn Ḥusein</i> who was one of the partisans of <i>Al-Mamūn</i> . Margin: <i>بسم الله ضرب هذا الدينار بمصر سنة مائتين In the name of God this dīnār was struck in Mīr thē year 200.</i>	4.22
93	201	Like 92. Struck in <i>Mīr</i> .	4.26
94	"	Beneath rev. area the letter <i>ح</i> .	4.12
95	202	Like 22. Struck in <i>Mīr</i> .	3.68
96	"	Beneath obv. area <i>المغرب Al-Maghrib</i> . Above rev. area <i>الله الفضل To God, Al-Faḍl</i> . Beneath rev. area <i>ذو الراسيتين Zu-r-rāṣatein</i> . Margin: <i>بسم الله ضرب هذا الدينار سنة اثنتين وما تين السرى In the name of God this dīnār was struck in the year 202, As-Sirry.</i>	3.90
97	203	Like 94 <i>ح</i> .	4.20
98	"	Beneath obv. area <i>المغرب Al-Maghrib</i> . Above rev. area <i>الله طاهر To God, Ṭāhir</i> . Beneath rev. area <i>السرى As-Sirry</i> . Margin, like 92, <i>struck in Mīr</i> .	
99	"	Like 89 but without the letter <i>ح</i> .	4.22
100	204	Like 98.	
101	"	Above rev. area <i>الله To God</i> .	4.07
102	205	Like 101 but much abraded.	3.45
103	"	Beneath obv. area <i>المغرب Al-Maghrib</i> . Above rev. area <i>الله طاهر To God, Ṭāhir</i> . Beneath rev. area <i>محمد ابن السرى Muḥammad ibn as-Sirry</i> , who was governor of Egypt.	4.22

7th Khalif—continued.

No.	Date A.H.	Description.	Weight grammes.
104	206	Beneath obv. area, عبید الله ابن السرى 'Ubeid- allah ibn as-Sirry, who was governor of Egypt. Above rev. area, الخليفة <i>The Khalif</i> . Beneath rev. area المأمون <i>Al-Mamūn</i> .	
105	207	Like 104.	
106	"	Marginal legend on obv. لله الامر من قبل ومن بعد و يومئذ يفرح المؤمنون بنصر الله <i>It is God who ordains in the past and in the future, on that day believers will rejoice in the divine protection.</i> Legend within the margin giving the date. Above rev. area لله <i>To God</i> .	4.21
107	208	Like 104.	4.25
108	209	Like 104.	4.22
109	"	Like 104, but in the marginal legend of the obv. the name of the place of mintage مصر <i>Misr</i> is introduced.	
110	210	Like 106.	4.01
111	215	Like 110, a very fine type.	4.23

8th Khalif, *Al-Mu'tasim-billah*, 218–227.

From this date the dinārs generally bear on the obverse, the marginal legend of 106 لله الامر من قبل الخ. The name of the place of mintage is incorporated into the legend giving the date. Above the reverse area we find the word لله *to God*, and beneath the reverse area, the name of the reigning Khalif.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
112	222	Medinet as-Salām مدينة السلام	Above rev. area لله <i>To God</i> beneath it المعتصم بالله <i>Al Mu'tasim-billah</i>	4.00
113	225	AlMuḥammadiyah المحمدية		
114	226	Merv مرو		4.21

الوائق بالله 9th Khalif, *Al-Wathik-billah*, 227—232.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
115	227	مصر Miṣr	Beneath rev. area الوائق بالله <i>Al-Wathik-billah</i> .	4.21
116	232	„	„	4.07

المتوكل على الله 10th Khalif, *Al-Mutawakkil-'ala-llah* 232—247.

117	238	مصر Miṣr	Beneath obv. area ابو عبد الله <i>Abu-'Abdallah</i> . Beneath rev. area المتوكل على الله <i>Al-Mutawakkil-'ala-llah</i> .	3.68
118	240	„	Beneath obv. area المعز بالله <i>Al-Mu'tazz-billah</i> . Beneath rev. area المتوكل على الله <i>Al-Mutawakkil-'ala-llah</i>	4.00
119	242	„	Like 118	4.26
120	243	„	„	3.93
121	245	„	„	4.23
122	246	„	„	4.18

المستعين بالله 12th Khalif, *Al-Musta'in-billah*, 248—256.

123	249	مصر Miṣr	Beneath obv. area : العباس بن <i>Al-'Abbas son of</i> امير المؤمنين <i>the commander</i> <i>of the faithful</i> . Beneath rev. area : المستعين بالله <i>Al-Musta'in-</i> <i>billah</i> .	4.16
124	250	„	Like 123	4.18
125	251	Ash-Shash	Like 123, clipped, abraded	4.11

المعز بالله 13th Khalif, *Al-Mu'tazz-billah*, 251—255.

126	253	Samarḳand	Beneath rev. area : المعز بالله امير المؤمنين	
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15th Khalif, *Al-Mu'tamid-'ala-llah*, 256—279.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
127	258	Medinet as-Salâm مدينة السلام	Beneath obv. area جعفر <i>Ja'far</i> Beneath rev. area المعتمد على الله <i>Al-Mu'tamid-'ala-llah</i> .	4.40
128	259	Miṣr.	Like 127, and beneath the name of the Khalif on the rev. area, the letter ر	4.25
129	260	„	Like 127	4.15
130	261	Surra-man-raa سمر من رأى	Like 127	4.11
131	„	„	Like 127, beneath rev. area البريز <i>ibriz</i> , which means <i>pure gold</i>	
132	263	Miṣr	Like 127	4.00
133	267	Medinet as-Salâm مدينة السلام	Like 127, but beneath obv. area الموفق بالله <i>Al-Muwaffak-billah</i> , brother of the Khalif	3.71
134	268	Samarḳand سمرقند	Like 132	4.23
135	270	„	„	4.20
136	„	Al-Ahwâz الاهواز	Beneath rev. area, under the Khalif's name ذوالوزارتين <i>Zu-l-wazdratein</i> .	3.86
137	273	Nomint mentioned		4.18
138	274	Ar-Râfiḳah الرافقة	Beneath obv. area : المفوض الى الله <i>Al-Mufawwad</i> الى الله <i>ila-llah</i> . Beneath rev. area احمد ابن الموفق بالله ر <i>Ahmad ibn al-Muwaffak-</i> <i>billah, r.</i>	3.76
139	275	Nomint mentioned	Beneath obv. area جعفر <i>Ja'far</i> Beneath rev. area شعيب <i>Shu'eib</i>	4.00

بالله 16th Khalif, *Al-Mu'tadid-billah*, 279—289.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
140	281	No mint	Like 138, and although struck two years after the occasion of <i>Al-Mu'tadid billah</i> , it still bears the name of the late Khalif <i>Al-Mu'tamid-'ala-llah</i> .	3.90
141	281	Hamadân حمدان	Beneath obv. area عمر ابن عبد العزيز 'Umar ibn 'Abd-al-'Aziz Beneath rev. area المعتضد بالله <i>Al Mu'tadid-billah</i> .	3.96
142	„	Ar-Râfiqah الرافقة		4.25
143	286	Halab حلب		3.55

المستكفي بالله 17th Khalif, *Al-Mustakfy-billah*, 289—295.

144	292	Miṣr مصر	Beneath rev. area : <i>Al-Mustakfy-billah</i> المستكفي بالله	4.24
145	293	Hamadân حمدان	Like 144	5.75
146	„	Miṣr مصر	„	4.11
147	294	„	„	4.11
148	295	Knmm قم	„	4.61

المعتذر بالله 18th Khalif, *Al-Muqtadir-billah*, 295—320.

149	296	Miṣr مصر	Above rev. area : لله To God. Beneath rev. area المعتذر بالله <i>Al-Muqtadir-billah</i> .	
150	300	Ar-Râfiqah الرافقة	Beneath obv. area : بو العباس بن <i>Abu-l-'Abbās</i> son of أمير المؤمنين the commander of the faithful	4.66

¹ In this year the last of the Tûlûny Princes was defeated by the 'Abbâsy Khalif, and Egypt again came under the direct government of the supreme government.

18th Khalif—*continued*.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
151	300	Harrân حران	Obv. area; above, one point •; below, two points • • same legend as on 149	
152	301	Furâh فرة	Like 150	2.76
153	„	Dimashk دمشق	„	3.66
154	„	Miṣr مصر	„	4.06
155	„	Filastîn فلسطين	„	3.90
156	302	Miṣr مصر	„	
157	304	„	„	3.90
158	305	Medīnet as-Salâm مدينة السلام	Like 150; beneath rev. area, the letter د	
159	306	„	„	
160	„	Miṣr مصر	Like 150	4.05
161	307	Filastîn فلسطين	„	4.29
162	308	Miṣr مصر	„	
163	309	„	„	
164	310	Ṣan'a صنعاء	Like 149, but of small size	1.90
165	„	Miṣr مصر	Like 150	4.04
166	311	„	„	3.66
167	312	„	„	4.15
168	„	Al-Muḥammadiyah المحمديه	„	4.10
169	„	Dimashk دمشق	„	4.11
170	„	Sûk-al-Ahwâz سوق الاهواز	„	
171	313	Miṣr مصر	„	3.79
172	316	Ardebîl اردبيل	Obv. area, like 149: beneath rev. area الفتح ابن افشين <i>Al-Fath ibn al-Afshin</i> مولى امير المؤمنين <i>Freedman of the commander of the faithful</i>	3.18

18th Khalif—*continued*.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
173	316	Sûk-al-Ahwâz سوق الاهواز	Like 150	
174	317	Miṣr مصر	"	4.05
175	318	"	"	3.35
176	319	"	"	4.00
177	320	"	Obv. area like 149. Beneath rev. area : عميد الدولة ' <i>Amīd-ad-dawlah</i> , who was the Wazīr.	

20th Khalif, *Ar-Rādy-billah*, 322—329.

178	322	Miṣr مصر	Beneath rev. area : الراضى بالله <i>Ar-Rādy-billah</i> .	3.90
179	323	"	Like 178	
180	325	Sûk-al-Ahwâz سوق الاهواز	"	
181	325	Miṣr مصر	"	
182	326	"	"	
183	328	"	"	
184	329	"	"	

21st Khalif, *Al-Muttaḳy-billah*, 329—333.

185	329	Miṣr مصر	Beneath rev. area : المتقى بالله <i>Al-Muttaḳy-billah</i>
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23rd Khalif, *Al-Muṭī'-lillah*, 334—363.

186	355	Filastīn فلسطين	Beneath rev. area : صلی الله علیه <i>May God be pro-</i> <i>pitious to Him</i> وعلى آله <i>and to his family</i> المطيع لله <i>Al-Muṭī'-lillah</i>
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الناصر لدين الله 34th Khalif, *An-Nāṣir-li-dīni-llah*, 575—622.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
187	608	Medinet as-Salām مدينة السلام	Obv. area : الإمام لا اله الا الله وهده لا شريك له الناصر لدين الله أمير المؤمنين <i>The Imam, There is no deity but God alone, He has no associate, An-Nāṣir li-dīni- llah commander of the faith- ful.</i> Inner circle and margin, as on 106. Rev. above area : الحمد لله <i>Glory to God,</i> beneath area صلى الله عليه <i>May God be propitious to Him</i>	11·20
188	609	„	Like 187	7·20
189	611	„	„	7·21
190	612	„	„	
191	613	„	„	9·03
192	614	„	„	10·10
193	„	„	„	5·48
194	816	„	„	3·11
195	„	„	„	2·93
196	617	„	„	6·53
197	621	„	„	8·09

الظاهر بامر الله 35th Khalif, *Aẓ-Zāhir-biamri-llah*, 622—633.

198	622	Medinet as-Salām مدينة السلام	Beneath obv. area : الظاهر بامر الله أمير المؤمنين <i>Aẓ-Zāhir-biamri-llah commander of the faithful.</i> In other respects this dinār is like 187. This dinār is unique.	7·44
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بالله 37th Khalif, *Al-Musta'sim-billah*, 640—656.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
199	640	Medinet as-Salâm مدينة السلام	<p>Obv. area:</p> <p>لا اله الا الله وحده لا شريك له المستعصم بالله امير المؤمنين بنصر الله</p> <p>لا يؤمنون يخرج المؤمنون</p> <p><i>The Imam There is no deity but God alone, he has no associate Al Musta'sim-billah commander of the faithful. in divine help.</i></p> <p><i>On that day the believers will rejoice</i></p> <p><i>It is God who ordains in the past and in the future</i></p> <p>Margin, place of mintage and date, rev. area like 187</p> <p>Like 199</p>	
200	641	"		6.60
201	642	"		8.99
202	643	"		13.89
203	649	"		4.94
204	64*	"		7.61
205	650	"		7.80
206	654	"		7.86
207	65*	"		8.97
208	6**	"		7.32
				7.90

II.—SILVER.

DIRHAMS OF THE DYNASTY OF THE 'ABBÂSY KHALIFS.

السفاح 1st Khalif, *As-Saffâh*, 132—136.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
209	132	Al-Kûfah الكوفة	<p>The dirhems of this dynasty are for the first few Khalifs so nearly alike, that one description will suffice, only departures from that type will be noticed in subsequent descriptions.</p> <p>Obv. area : لا اله الا الله <i>There is no deity but God alone,</i> الله وحده <i>He has no associates.</i> Margin : بسم الله ضرب هذا الدرهم بالكوفة سنة اثنتين وثلاثين <i>In the name of God this dirham was struck in al-Kûfah the year 132.</i> Rev. area : محمد <i>Muhammad</i> رسول <i>is the apostle</i> الله <i>of God.</i> Margin : محمد رسول الله ارسله بالهدى ودين الحق ليظهره على الدين كله <i>Muhammad is the apostle of God, He sent him with direction and the true religion, that he might extol it above all other religions even though polytheists should be averse thereto.</i></p>	2.68 2.86 2.80
210	135	"		
211	136	"		

المنصور 2nd Khalif, *Al-Mansûr*, 136-158.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
212	145	Armenia أرمينية		2.24
213	149	"		2.78
214	152	"		2.90
215	136	Al-Basrah البصرة		2.90
216	137	"		2.85
217	138	"		2.91
218	139	"		2.90
219	142	"		2.75
220	143	"		2.88
221	144	"	Beneath rev. area س	2.90
222	145	"	" س	2.90
223	146	"	" °	2.81
224	147	"	" ° °	2.96
225	157	"	" °	2.85
226	140	Junday-Sapûr جندی ساپور		3.01
227	146	Ar-Rayy الرى	Rev. area : مما امره ا لمهدى محمد بن امير المؤمنين By order of <i>Al-Mahdy Muhammad</i> son of the commander of the faithful.	2.85
228	147	"	Like 227	2.79
229	"	"	"	
230	148	"	"	2.85
231	137	Al-Kûfah الكوفة		2.78
232	139	"	Beneath rev. area •	2.28
233	140	"	" • •	2.90
234	142	"	" ∴	2.85
235	143	"	" "	2.92
236	144	"	" "	2.65
237	145	"	" "	2.90
238	146	"	" "	2.83
239	147	"	" "	2.88

2nd Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
240	148	AlMuhammadiyah المحمديّة		
241	"	"	Like 227, beneath rev. area د	2.27
242	"	"	"	2.91
243	"	"	"	2.90
244	149	"	Like 227, but above rev. area and beneath rev. area د	2.91
245	149	"	Like 244	
246	"	"	"	
247	"	"	"	
248	"	"	"	
249	150	"	"	2.95
250	"	"	"	
251	"	"	"	
252	"	"	"	
253	151	"	"	3.05
254	"	"	"	
255	152	"	"	2.91
256	"	"	"	
257	153	"	"	2.95
258	"	"	"	
259	148	Medinet as-Salâm مدينة السلام	Like 227 but beneath rev. area	
			ب.ج.	2.92
260	149	"	" " "	2.90
261	150	"	" " "	2.92
262	151	"	" " "	2.89
263	152	"	" " "	2.81
264	"	"	" " "	
265	153	"	" " "	2.75
266	"	"	" " "	
267	154	"	" " ب.ج. ب.ج.	2.89
268	"	"	" " " "	
269	"	"	" " " "	
270	"	"	" " " "	
271	"	"	" " " "	

2nd Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight, grammes.
272	155	Medinet as-Salām مدينة السلام	Like 227 but beneath rev. area بج. بج.	2.83
273	156	"	" " " "	2.90
274	"	"	" " " "	
275	157	"	" " " "	2.81
276	158	"	" " " "	2.86

3rd Khalif, *Al-Mahdy*, 158—169.

277	161	Armenia أرمينية	Rev. area: محمد رسول الله صلى الله عليه وسلم الخليفة المهدى Muhammad is the apostle of God, may God be propitious to him and give him peace. The Khalif al-Mahdy. a crescent.	2.92
278	168	"	Like 277, but instead of crescent, بن حزم Son of Huzeim	2.75
279	"	Afrikiyeh أفريقية	Rev. area: الخليفة المهدى سما أمر به هرون بن أمير المؤمنين The Khalif al-Mahdy, By order of Harūn son of the commander of the faithful.	
280	160	Al-Baṣrah البصرة	Like 277, but instead of crescent, Muhammad, pro- bably referring to Muham- mad ibn Suleimān, who was governor of Baṣrah	2.68
281	161	"	Like 280	

3rd Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
282	167	Al-Basrah البصرة	Rev. area: الخليفة المهدي وما امر به موسى ولي عهد المسلمين بصرة <i>The Khalif al-Mahdy. By order of Músa heir of the Muslims Basrah.</i>	
283	162	Medinet Jayy مدينة جى	Like 277, but instead of crescent بجى <i>In Jayy.</i> ³	
284	"	"	Like 283	
285	159	Al-'Abbasiyeh العباسية	Above rev. area: بنج; beneath rev. area: يزيد <i>Yezid</i>	2.50
288	160	"	Like 285	3.05
287	162	"	Above rev. area, below it يزيد <i>Yezid</i>	2.93
288	164	"	" "	2.60
289	165	"	" "	2.62
290	166	"	" "	2.62
291	168	"	" "	2.28
292	160	Al Muhammadiyah المحمدية	Like 277, but rev. area in three lines instead of four	2.85
293	161	"	Like 277, in four lines	2.75
294	165	"	Lk. 277 and beneath rev. area	2.90
295	168	"	" "	2.81
296	"	"	" "	
297	167	"	Like 277, above rev. area • Beneath rev. area بنج	2.92
298	159	Medinet as-Salâm مدينة السلام	Like 277	2.85
299	160	"	"	2.78
300	"	"	"	
301	"	"	"	
302	161	"	"	2.93
303	"	"	"	

³ I read this بجى *Yahyd.*—S.L.-P.

3rd Khalif—*continued*.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
304	161	Medînet as-Salâm مدينة السلام	Like 277	
305	"	"	"	
306	162	"	"	2.93
307	"	"	"	
308	"	"	"	
309	163	"	"	2.87
310	164	"	"	2.88
311	"	"	"	
312	"	"	"	
313	"	"	"	
314	"	"	"	
315	165	"	"	1.90
316	168	Al-Yamâmeh اليمامة	Like 277, but rev. area in three lines instead of four, and above it عبد الله 'Abd-allah, below it سعيد بن سعيد 'Idn Sa'id.	2.94
317	169	Ḳaṣr as-Salâm قصر السلام	Like 277, but above rev. area الحمد لله and below it الحمد لله <i>Glory to God.</i>	
318	169	Harûnabâd هاروناباد	Like 279, but above rev. area ارمنية Armenia, and below it جيش the army of. ⁴	

4th Khalif, *Al-Hâdy*, 169—170.

319	169	Harûnîych هارونية	Rev. area: خزيمة الخليفة الهادي مما امر به هارون ابن امير المؤمنين بن حازم <i>Khazimeh</i> <i>The Khalif al-Hâdy</i> <i>By order of Harûn</i> <i>son of the commander of the</i> <i>faithful.</i> <i>son of Khâzim</i>	2.76
320	170	"	Like 277	

⁴ Tiesenhausen reads this word حسن Hasan.—S.L.-P.⁵ Correctly, I think, with a ح خزيمة بن حازم.—S.L.-P.

الرشد 5th Khalif, *Ar-Rashid*, 170—193.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
321	191	Armenia أرمينية	Rev. area : خزيمة بن خازم محمد رسول الله الأمين ولي عهد المسلمين السرلسار <i>Khazimeh ibn Khazim</i> <i>Muhammad is the apostle</i> <i>of God, Al-Amin heir of</i> <i>the Muslims.</i> * * * *	2.79
322	183	Afrikiyeh أفريقية	Rev.area: محمد رسول الله نبي الرحمة <i>Muhammad is the apostle</i> <i>of God, prophet of</i> <i>compassion.</i> above, محمد <i>Muhammad</i> be- low, العكي <i>Al-'Ukky</i> . In 181 <i>Muhammad Al-'Ukky</i> was ap- pointed Governor of Afriki- yeh by the Khalif Harûn ar- Rashid, and in 184 was suc- ceeded by Ibrahim al-Aghlab.	2.91
323	182	Medinet Balkh مدينة بلخ	Rev. area: محمد رسول الله مما أمر به الأمير الأمين محمد بن أمير المؤمنين ولي عهد المسلمين بنج <i>Muhammad is the apostle of</i> <i>God. By order of the Amir</i> <i>Al-Amin Muhammad son of</i> <i>the commander of the faithful,</i> <i>heir apparent of the Muslims.</i>	2.88

5th Khalif—continued.

No.	Date A. H.	Place of Mintage.	Description.	Weight grammes.
324	185	Medinet Balkh مدينة بلخ	Rev. area : و محمد رسول الله مما امر به الامير ولى عهد المسلمين الامين محمد بن امير المؤمنين بنح <i>Muhammad is the apostle of God. By order of the Amir heir apparent of the Muslims, Al-Amin Muhammad, son of the commander of the faithful</i>	2·83
325	185	„	Rev. area : و محمد رسول الله مما امر به الامير المامون عبد الله بن امير المؤمنين ولى ولى عهد المسلمين بنح <i>Muhammad is the apostle of God. By order of the Amir al-Mamûn 'Abdallah son of the commander of the faith- ful, heir of the heir apparent of the Muslims.</i>	2·87
326	„	„	Like 325	2·68
327	186	„	„	
328	187	„	„	
329	188	„	„	2·94
330	189	„	„	2·97

5th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
331	190	Medinet Balkh مدينة بلخ	Rev. area : محمد رسول الله وما امر به الامير على بن عيسى مولى امير المؤمنين <i>Muhammad is the apostle of God. By order of the Amir 'Aly son of 'Isa, freedman of the commander of the faithful.</i>	2.55
332	193	„	Above rev. area, ح beneath it .	2.80
333	190	Ar-Râfikah الرافقة	Beneath rev. area, the letter ر	2.43
334	17*	Medinet Zerenj مدينة زرنج	Rev. area : محمد رسول الله صلى الله عليه وسلم الخلافة الرشيد <i>Muhammad is the apostle of God. May God be propitious to him and give him peace. The Khalif ar-Rashid.</i> And beneath it رنج	2.92
335	180	„	Like 334, but beneath rev. area, جعفر Ja'far	2.77
336	184	„	Like 334, but above rev. area, علي 'Aly, and beneath it ابن بركة ibn Barakah	
337	185	„	Like 336	
338	187	„	Like 336, but beneath rev. area, سيف ابن الطبراني Seif ibn at-Tabarany.	
339	192	„	Like 334, above rev. area, هروثة Harthemah and below it الحكم Al Hakam.	2.83

5th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
340	193	Medinet Samar- kand مدينة سمرقند	Beneath rev. area, جعونة <i>Ja'âneh</i>	2·88
341	170	Al-'Abbâsiyeh العباسية	Above rev. area, بنج and below it, يزيد <i>Yezid</i>	2·95
342	171	„	Above rev. area, بنج مر, below it, يزيد ول <i>Yezid</i>	2·41
343	174	Al-Mnbâarakah المباركة	Above rev. area, ع, below it, مل	2·78
344	170	Al-Muhammadiyeh المحمدية	Like 334, but above rev. area, مبا and below it ركت, to- gether <i>Mubâarak</i> .	
345	„	„	Like 344, but legend on rev. area in four lines instead of three.	
346	171	„	Like 345	2·85
347	172	„	Rev. area : محمد رسول الله الخليفة الرشيد مما امر به محمد بن امير المؤمنين <i>Muhammad is the apostle of God. The Khalif ar-Rashid By order of Muhammad son of the commander of the faithful.</i>	
348	„	„	Above it حارث <i>Hârith</i> and below it صو. Like 347, but above rev. area, الحارث <i>Al-Hârith</i> and below it الفضل <i>Al-Faql</i> .	2·73
349	„	„	Like 346, but above rev. area : دا and below it ود, together <i>Daûd</i> .	2·67

5th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
350	173	Al Muḥammadiyah المحمدية	Like 346, but above rev. area: مخلى <i>Nakhly</i> ⁶ and below it بہلول <i>Bahlul</i> .	2.95
351	175	"	Like 334, but beneath rev. 'area يزيد <i>Yezid</i> .	
352	180	"	Rev. area: محمد رسول الله مما امر به الامير الامين محمد بن امير المؤمنين ولاية محمد الرحى جعفر <i>Muhammad is the apostle of God. By order of the Amir Muḥammed son of the Com- mander of the faithful, during the governorship of Muḥammad ar-Rahby, Ja'far</i>	2.50
353	"	"	Rev. area: محمد رسول الله مما امر به الامير الامين محمد بن امير المؤمنين <i>Muhammad is the apostle of God. By order of the Amir Muḥammad son of the com- mander of the faithful.</i> Above it و below it جعفر <i>Ja'far</i> .	2.85
354	"	"	Like 353	2.55
355	181	"	Like 353	2.86
356	182	"	Like 353, but above rev. area ∴ and below جعفر <i>Ja'far</i> .	2.80
357	"	"	Like 356	
358	"	"	Like 356	
359	183	"	Like 356, but without the ∴	2.90
360	"	"	Like 353, but above rev. area داود <i>Daūd</i> and below it دد	2.80

⁶ Rather يحيى *Yahyā*.—S.L.-P.

5th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
361	184	Al Muḥammadiyah المحمدية	Rev. area : محمد رسول الله صلى الله عليه وسلم مما امر به الامير الامين محمد بن امير المؤمنين <i>Muhammad is the apostle of God, may God be propitious to him and give him peace. By order of the Amir Al- Amir Muhammad son of the commander of the faithful.</i> Above it, جعفر below س Ja'far.	2·85
362	185	„	Like 361, but س instead of و above rev. area	3·00
363	186	„	Like 362	2·86
364	„	„	„	
365	„	„	„	
366	188	„	Like 209, and below area ز	2·98
367	189	„	„	2·99
368	190	„	„	2·84
369	193	„	„	2·96
370	171	Medinet as-Salâm مدينة السلام	Like 209, but beneath rev. area, ز and an inner circular legend on the rev. : مما امر به عبد الله هرون امير المؤمنين By order of the servant of God, Harûn, commander of the faithful.	2·80
371	179	„	Like 362, and beneath rev. area جعفر Ja'far	2·77
372	„	„	„	
373	„	„	„	
374	180	„	„	2·84
375	„	„	„	
376	181	„	„	2·75
377	182	„	„	2·97
378	183	„	„	3·00
379	186	„	„	2·90

5th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
380	187	Medinet es Salâm مدينة السلام	Like 209	2.95
381	"	"	"	
382	"	"	"	
383	188	"	Like 209, beneath rev. area	2.88
384	189	"	"	2.95
385	190	"	"	2.92
386	"	"	"	
387	"	"	"	
388	191	"	"	2.90
389	"	"	"	
390	192	"	"	2.86
391	"	"	"	
392	193	"	"	2.88
393	"	"	"	
394	190	Ma'din ash-Shash معدن الشاش	Like 325, but above rev. area التصريح على an-Nâsir	2.67
395	"	"	Like 394	2.85
396	"	"	"	
397	"	"	"	
398	192	Ma'din Bajunays معدن بجونيس	Like 353, but above rev. area Ja'far, and below it Daûd	2.65

6th Khalif, *Al-Amîn*, 193—198.

399	197	Medinet Ispahân مدينة اسفهان	Above rev. area: لله To God, and below هارثمة Harthemah and	2.91
400	198	"	Like 399	2.95
401	194	Medinet Bukhâra مدينة بخارا	Rev. area : محمد رسول الله مما امر به الامير المامون ولي عهد المسلمين عبد الله بن امير المؤمنين Muhammad is the apostle of God. By order of the Amir al-Mamûn heir of the Muslims, Abdallah, son of the commander of the faithful. Above لله To God, below الفضل Al-Faql.	2.77

6th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
402	194	Medinet Balkh مدينة بلخ	Like 401	2.98
403	194	Medinet Samarkand مدينة سمرقند	„	2.50
404	193	Medinet as-Salâm مدينة السلام	Above rev. area : ربي الله <i>My Lord is God.</i>	2.95
405	194	„	Like 404	2.92
406	195	„	Like 404, but beneath rev. area مما امر به الامين محمد امير المؤمنين العباس <i>By order of Al-Amin Muhammad, commander of the faithful. Al-'Abbâs.</i>	2.92
407	195	„		
408	196	„	Like 406, but beneath rev. area مما امر به عبد الله محمد امير المؤمنين الامين <i>By order of the servant of God Muhammad, commander of the faithful, Al-Amin.</i>	2.86
409	194	Medinet Nisâpûr مدينة نيسابور	Rev. area : محمد رسول الله مما امر به الامير المامون ولي عهد المسلمين عبد الله بن امير المؤمنين <i>Muhammad is the apostle of God. By order of the Amir al-Mamûn heir of the Muslims, 'Abdallah son of the commander of the faithful.</i> Above it لله <i>To God and</i> below it جبريل <i>Jibrail</i>	2.65

6th Khalif—continued.

No.	Date A.H.	Place of Minting.	Description.	Weight grammes.
410	196	Medinet Herât مدينة هرات	Above rev. area, لله To God beneath it الفضل <i>Al-Faḍl</i>	
7th Khalif, <i>Al-Mamûn</i> , 195—218.				
411	200	Medinet Ispahân مدينة اسبهان	Beneath obv. area, المشرق <i>Al-Mashrik, The East.</i> Beneath rev. area ذو الرياستين <i>Holder of two offices.</i>	2.90
412	201	„	Like 411	2.90
413	198	Al-Baṣrah البصرة	„	2.90
414	195	Medinet Samarkand مدينة سمرقند	Rev. area: محمد رسول الله ما امر به الامام المامون امير المؤمنين <i>Muhammad is the apostle of God. By order of the Imâm Al-Mamûn commander of the faithful.</i> Above لله To God, below الفضل <i>Al-Faḍl</i>	
415	197	„	Like 414	3.25
416	198	„	Like 414, but above rev. area: وبه to God and by Him	3.12
417	199	„	„	2.85
418	200	„	„	2.83
419	201	„	„	2.63
420	206	Al-Kûfah الكوفة	Above rev. area, لله To God	3.02
421	198	Medinet as-Salâm مدينة السلام	Rev. area, above لله To God. Below it, ذو الرياستين <i>Holder of two offices.</i>	2.91
422	199	„	„	2.90
423	200	„	„	2.90
424	„	Al Muḥammadiyah المحمديه	„	
425	199	Medinet Herat مدينة هرات	„	3.20

المعتصم بالله 8th Khalif, *Al-Mu'tasim-billah*, 218—227.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
426	222	دمشق Dimashk	On this and nearly all following dirhoms, a second marginal legend appears on the obv., namely, لله الامر من قبل ومن بعد ويومئذ يفرح المؤمنون بنصر الله <i>It is God who ordains in the past and in the futuro; on that day believers will rejoice in the divino protection.</i> Rev. area: above لله <i>To God, below it المعتصم بالله</i> <i>Al-Mu'tasim-billah.</i>	2.79
427	222	"	"	
428	226	Medinet as-Salâm مدينة السلام	"	2.92

الواثق بالله 9th Khalif, *Al-Wathik-billah*, 227—232.

429	229	إصبهان Ispahân	Beneath rev. area الواثق بالله <i>Al-Wathik-billah.</i>	2.82
430	227	Medinet as-Salâm مدينة السلام		
431	230	"		
432	226	مصر Miṣr		

المتوكل على الله 10th Khalif, *Al-Mutawakkil*, 232—247.

433	247	البصرة Al-Baṣrah	Beneath obv. area المعتز بالله <i>Al-Mu'tazz-billah.</i> Beneath rev. area المتوكل على الله <i>Al-Mutawakkil-'ala-llah.</i>	3.68
434	235	Surra-man-raa سر من رأى	On obv. area, <i>Al-Mutawakkil-</i> <i>'ala-llah</i> المتوكل على الله	4.00
435	244	Medinet as-Salâm مدينة السلام	Like 433	4.26

المعتز بالله 13th Khalif, *Al-Mu'tazz-billah*, 251—255.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
436	251	Surra-man-raa سرمين راي	Beneath rev. area : المعتز بالله امير المؤمنين <i>Al Mu'tazz-billah</i> <i>commander of the faithful.</i>	2.85
437	***		A small dirhem which appears to have been neatly clipped. It bears neither date nor place of mintage, the legends on the area are unusual. Obv. : لا اله الا الله الله المعتز بالله ابقاه الله <i>There is no deity but God. Al-Mu'tazz-billah. May God protect him.</i> Rev. : محمد رسول الله عبد الله بن امير المؤمنين <i>Muhammad is the apostle of God. 'Abdallah, son of the commander of the faithful.</i>	0.95

المعتد على الله 15th Khalif, *Al-Mu'tamid-'ala-llah*, 256—279.

438	267	Surra-man-raa سرمين راي	المفوض Beneath obv. area : <i>Al-Mufawwad-'ala-llah.</i> Beneath rev. area : <i>Al-Mu-tamid-'ala-llah.</i>	2.78
439	266	Medinet as-Salâm مدينة السلام	„	2.75
440	264	Nasibin نصيبين	„	3.05

المعتضد بالله 16th Khalif, *Al-Mu'ta'ad-billah* 279—289.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
441	288	البصرة Al-Basrah	Beneath rev. area : <i>Al-Mu'tadid-billah.</i>	3.40
442	"	Surra-man-raa	"	
444	286	سمر من رأى Medinet as-Salâm	"	3.00
443	284	مدينة السلام Wâsit	"	
445	289	"	"	2.65

المكتفى بالله 17th Khalif, *Al-Muktafî-billah*, 289—295.

446	292	الكوفة Al-Kûfah	Beneath rev. area المكتفى بالله <i>Al-Muktafî billah</i>	3.12
447	290	Medinet as-Salâm	"	
448	291	مدينة السلام "	Like 443, but beneath obv. area : ولي الدولة <i>Waly ad-dawlah.</i>	1.53 3.17
449	"	"	"	
450	294	"	"	2.92
451	295	الموصل Al-Môsil	"	3.12

المقتدر بالله 18th Khalif, *Al-Muqtadir-billah*, 295—320.

452	319	Ras-al-'ain راس العين	Beneath obv. area : أبو العباس <i>Abu-l'Abbas</i> بن أمير المؤمنين <i>son of the</i> <i>commander of the faithful.</i> Beneath rev. area : المقتدر بالله <i>Muqtadir billah.</i>	3.87
453	302	Surra-man-raa	"	
454	304	سمر من رأى	"	2.78
455	313	"	"	3.05
456	317	"	"	3.12
			"	3.32

18th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
457	298	فارس Fars	Liko 452, but without the name Abu-l'Abbas, etc., on the obv. area	
458	297	Medinet as-Salâm مدينة السلام	Like 452	3.27
459	302	"	"	2.91
460	303	"	"	3.16
461	304	"	"	2.83
462	"	"	"	
463	306	"	"	3.50
464	312	"	"	3.52
465	315	"	"	3.98
466	319	"	"	2.92
467	"	"	"	4.82
468	320	"	"	2.78
469	318	نصيبين Naṣībīn	Like 452	2.82

19th Khalif, *Al-Kāhir-billah*, 320—322.

470	321	Medinet as-Salâm مدينة السلام	Beneath rev. area القاهرة بالله <i>Al Kāhir-billah</i>	2.58
471	322	"	Like 467, but beneath obv. area: المنتقم من اعدا الله لدين الله <i>The avenger of God's enemies for the sake of God's religion.</i>	2.79
472	321	الموصل Al-Môṣil	Like 470	3.50
473	322	نصيبين Naṣībīn	"	2.85

20th Khalif, *Ar-Rādy-billah*, 322—329.

474	324	البصرة Al-Baṣrab	Beneath obv. area الراضى بالله <i>Ar-Rādy-billah</i>	3.93
475	323	Ras-al-'ain راس العين	"	3.36
478	"	Surra-man-raa سرمن راى	"	3.65

20th Khalif—continued.

No.	Date A.H.	Place of Mintage.	Description.	Weight gramms.
477	327	Surra-man-raa سرمن رای	Like 474, but beneath obv. area: ابو الفضل بن امير المؤمنين <i>Abu-l-Faql, son of the commander of the faithful</i>	2.54
478	322	Medinet as-Salâm مدينة السلام	Like 474	3.39
479	323	"	"	3.93
480	"	"	"	2.70
481	324	"	"	3.65
482	325	"	"	2.81
483	"	"	"	
484	"	"	Like 477	
485	326	"	"	3.63
486	"	"	"	
487	327	"	"	2.28
488	328	"	"	3.62
489	323	Al-Môsil	Like 474	2.59
490	327	"	"	2.65
491	323	Naşibîn	"	4.68

21st Khalif, *Al-Muttaky-billah*, 329—333. المتقي بالله

492	329	Medinet as-Salâm مدينة السلام	Beneath obv. area: ابو منصور بن امير المؤمنين <i>Abu-Manşûr son of the commander of the faithful</i> Beneath rev. area: المتقي بالله <i>Al-Muttaky-billah</i>	3.82
493	330	"	"	4.05
494	329	Naşibîn نصيبين	"	3.35

المستنصر بالله 36th Khalif, *Al-Mustanşir-billah*, 623—640.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
495	633	Medinet as-Salâm مدينة السلام	Obr. area : لا اله الا الله محمد رسول الله <i>There is no deity but God, Muḥammad is the apostle of God.</i> Margin : بسم الله ضرب هذا الدرهم بمدينة السلام سنة ثلث وثلاثين وستمائة <i>In the name of God, this dirham was struck in Medinet as-Salâm, the year 633.</i> Rev. area : الامام <i>The Imâm</i> المستنصر <i>Al Mustanşir-</i> billah, commander المؤمنين <i>of the faithful.</i> Margin : نصر من الله وفتح قريب وبشر المؤمنين <i>Help from God and a speedy victory, give good news to the faithful.</i>	2.97 2.95 2.80
496	638	"	"	
497	639	"	"	

المستعصم بالله 37th Khalif, *Al-Musta'sim-billah*, 640—656.

498	646	Medinet as-Salâm مدينة السلام	Like 492, excepting the name of the Khalif المستعصم بالله <i>Al Musta'sim-billah.</i>	2.95 2.80
499	656	"	"	

III.—COPPER COINS OF THE 'ABBÂS DYNASTY.

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
500	***	Al-Môsil الموصل	<p>Obv. area, in three lines: لا اله الا الله وحده <i>There is no deity but God alone; and below it an ornament like a fleur-de-lis</i> Margin: The words separated by annulets, ضرب هذا الفلّس بالموصل <i>This fals was struck in Al-Môsil.</i></p> <p>Rev. area, in three lines: لا قوة الا بالله العظيم <i>There is no strength but in God the Almighty.</i> Margin: امير الامير جعفر بن امير المؤمنين على يد عثمان بن اسحق <i>By order of Ja'far, son of the commander of the faithful, by the hands of 'Uthmân son of Is-hâk.</i></p>	5.89
501	145	Ar-Rayy الرى	<p>Obv. area, in three lines: لا اله الا الله وحده لا شريك له <i>There is no deity but God alone, He has no associates.</i> Margin: بسم الله ضرب هذا الفلّس بالرى سنة خمس واربعين ومئة <i>In the name of God this fals was struck in Ar-Rayy the year 145.</i></p> <p>Rev. area, in three lines: محمد رسول الله <i>Muhammad is the apostle of God</i> Above it and below it a dot •</p>	

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
			Margin :	
			<p>مما امر به المهدي محمد بن امير المؤمنين اكرمه الله <i>By order of Al-Mahdy Mu- hammad, son of the com- mander of the faithful, may God be bountiful to him.</i></p>	2.45
502	155	Medinet as-Salâm	Like 502, but above rev. area,	
		مدينة السلام	سج. and below it سج.	3.53
503	***	—	Like 502, but margin of rev. area, محمد رسول الله ضرب	
			..... هذا الفلّس <i>Mu- hammad is the apostle of God, this fals was struck.</i>	
504	161	Medinet as-Salâm	Like 502, but above rev. area	
		مدينة السلام	∴ and below it عدل <i>just.</i>	
505	163	Al-Kûfah	Like 502, but margin of rev.	
		الكوفة	<p>مما امر به المهدي محمد امير المؤمنين بالكوفة سنة ثلث وستين ومئة <i>By order of Al-Mahdy Muhammad commander of the faithful in al-Kûfah the year 163.</i></p>	
506	"	"		
507	166	"	Like 505, but above rev. area a star *.	
508	167	مصر	Like 505, but in margin ابن صالح <i>Ibn-Sâlih.</i> Rev. area, in three lines :	
			محمد رسول الله صلى الله عليه وسلم <i>Muhammad is the apostle of God, may God be propitious to him and give him peace.</i>	
509	168	Medinet Amul	Like 501	
		مدينة امل		

No.	Date A.H.	Place of Mintage.	Description.	Weight grammes.
510	***	Kūmis قومهس	Obv. margin : بسم الله ضرب هذا الفلّس بقومهس على يدى علي بن الحجاج <i>In the name of God this fals was struck in Kūmis by the hands of 'Alī son of al-Hajjāj.</i>	
511	***	—	Obv. area : مما امر به ولي عهد المسلمين محمد بن امير المؤمنين <i>By order of the heir of the Muslims, Muhammad son of the commander of the faithful</i>	
512	186	Al-Baḡrah البصرة		
513	187	Medinet as-Salām مدينة السلام		
514	„	„		
515	189	Ar-Rāfiḳah الرافقة	Rev. margin : بسم الله مما امر به عبد الله هرون امير المؤمنين اعز الله نصره <i>In the name of God, by order of the servant of God Harūn, commander of the faithful, may his victory be extolled.</i>	
516	192	Dimashḳ دمشق	Rev. area : مما امر به هرون امير المؤمنين اعز الله نصره بمخ <i>By order of Harūn com- mander of the faithful, may his victory be extolled.</i>	
517	„	„	„	

No.	Date A. H.	Place of Mintage.	Description.	Weight grammes.
518	200	Hamadân حمدان	Date on the obv.	
519	2**	—	Beneath rev. area, probably ناصر Nâsir	
520	***	Medinet as-Salâm مدينة السلام	Obv. area, in four lines: الامام المستنصر بالله اميرا المومنين The Imâm Al- Mustansir billah commander of the faithful.	
521	***	”	”	
522	***	”	Slightly differing from 517	
523	***	”	”	
524	***	”	”	
525-539			Inscription much abraded	

MISCELLANEA.

I. THE GRIFFIN ON COINS.—The last two numbers of the *Chronicle* have contained friendly criticisms of some of my numismatic attributions by Mr. H. Howorth and Mr. Bunbury. Some notice of these criticisms on my part would seem to be desirable, otherwise it might be supposed that I was willing to allow judgment to go against my attributions by default. I will therefore put together in small space a few remarks on the papers of my critics, or rather on one or two points raised by them which seem more especially to invite discussion.

Mr. Howorth¹ doubts the correctness of my description when I assign a lion's head to the griffin on the coins of Panticapaum, on the ground that "a lion-headed griffin is as much a solecism as a lion-headed Cerberus would be." But this question is one not of opinion but of fact. And the fact is that lion-headed griffins are not at all unusual in ancient art. For instance, on a vase from the Crimea,² on which a battle is depicted between Arimaspi and two griffins, one of those creatures has a leonine and one an aquiline head, though they are in other respects alike. Lion-headed griffins are represented in relief fighting against oriental warriors on the seat of the priest of Dionysus from the Theatre of Dionysus at Athens. Many other instances could be cited, but it is unnecessary. That the griffin on the Panticapaean coins is of the leonine rather than the aquiline type is certain, if only from the fact that he is horned, for eagle-headed griffins have no horns.

II. THE COINAGE OF THE SELEUCIDAE.—The two plates which accompany Mr. Bunbury's paper give us valuable new material for the classification of the Seleucid coins; and his remarks are temperate and well-judged. On many points he questions the attributions adopted in my *Catalogue of the Seleucidae*, but usually without proposing another classification in the place of that he rejects. Now I am at least as sceptical as Mr. Bunbury

¹ *Num. Chron.*, 1883, p. 23.

² *Ant. du Bosph. Cim.*, Pl. XLVI.

in these matters. The attributions which he doubts I doubt and have always doubted. But I was under the necessity, in drawing up a catalogue, of selecting some mode of classification or another; and it would have been useless and absurd to fill my pages with suggestions of alternative attributions or with notes of interrogation. The fact is that in the absence of more definite indications to guide us in the classification of coins we are sometimes obliged to go by those of iconography. And iconography can never be a safe or trustworthy guide. In iconography, *quot homines tot sententiae*, and what one clearly sees another will resolutely deny. To take an instance, I assigned on grounds of iconography two coins to Antiochus I., *Catalogue of Seleucidae*, Pl. II., Nos. 2 and 3. Of course I did so without much confidence, but I could not find any better classification. Both of these coins are by Mr. Bunbury given on the same grounds to Antiochus II., with so much confidence that he regards my attribution as "unaccountable." Let us then turn to Mr. Howarth. This critic holds that my attribution of No. 3 to Antiochus I. is quite correct. "The pinched lips and square cheeks" of Antiochus I. "are as marked on his young head as shown in Fig. 3 as on the older heads in Figs. 4, 5, 6, and 7." But he rejects my attribution of No. 2. "The head on the coin numbered 2 is entirely different in every respect. Not only so, but it is precisely the head of Antiochus II." It only remains that some one should give No. 2 to Antiochus I. and No. 3 to Antiochus II., to exhaust all the possible varieties of opinion. My own revised opinion, after considering what both writers have to say, is that the two coins were probably issued by the same king, but that it is quite impossible to say with an approach to certainty whether that king is Antiochus I. or II.

It is quite clear that in matters like this discussion may be produced *ad infinitum* without procuring a solid result. Hence, though I have read Mr. Bunbury's paper with care, and by no means without instruction and profit, I do not know that he has lighted on any one statement in my catalogue which I should be inclined to consider as an erratum except in one instance. I seem to have been wrong, although following the authority of Eckhel, Leake, and Clinton, in stating that Seleucus II. was at one time a captive in Parthia. He was defeated by the Parthians, but not, apparently, captured by them. This mistake, however, did not lead me to misplace any coins. Mr. Bunbury's criticisms also on my assignment of coins of Antiochus IV. to the mint of Salamis in Cyprus, and of the celebrated coin of Cleopatra to the mint of Sycamina, have increased the misgivings with which I originally placed those

coins. But in neither case does Mr. Bunbury suggest any preferable attribution.

The proper arrangement of the coins of several dynasties of Hellenistic times must always remain more or less doubtful. The money of the earlier Selencidae, of the early Arsacidae, of the Ptolemies of Egypt, and the Philetaeri of Pergamum, will always be of more or less uncertain assignment. Fortunately in most series we proceed on more safe grounds, so that on the whole numismatics can claim to be a sound and inductive science.

PERCY GARDNER.

Mr. Howorth in his paper on "Some Re-attributions," referred to above by Mr. Gardner, takes exception to the attribution, in the *Catalogue of Roman Medallions* (British Museum), of the gold medallion in the national collection to Diocletian, although it bears the name of that Emperor, and attempts to show that the portrait is that of Maximian, but executed before the latter's accession to imperial power. Setting aside the fact that portraits in Roman coins at the end of the third century A.D. go for very little, I think that Mr. Howorth, on other grounds, has not proved his case. In the first place, the portrait on the medallion, which was struck at Nicomedia, resembles more closely that on the coin of Diocletian issued in that city than that on the coins of Maximian of the same mint; and in the second place, Mr. Howorth did not sufficiently examine the style of the medallion, or he would have seen that it could not have been issued till several years after Diocletian had appointed Maximian his colleague in the empire, as the type of the head is not that of the coins issued during the first few years of this joint rule, but that of the time after the reformation of the coinage, in A.D. 296. The type and standard of the coinage then underwent a complete change. The difference of the type and style of the coinages of the two periods is so very marked, that there can be no doubt in attributing the issue of the medallion to a period after A.D. 296.

H. G.

NOTICES OF RECENT NUMISMATIC PUBLICATIONS.

Les Médailleurs Italiens des quinzième et seizième Siècles, par Alfred Armand. Deuxième édition, 2 vols. 8vo. Paris: E. Plon & Cie. 1888.

Though this is nominally only the second edition of M. Armand's work, it is so much enlarged as to be practically a new book. The second volume, at all events, must be considered entirely new. For, in the first edition of the *Médailleurs Italiens*, M. Armand attempted only to give a catalogue of medals whose authorship was known. He now adds a volume devoted altogether to anonymous works, and though this addition may be thought somewhat inconsistent with the title of his book, there can be no question that it is of the greatest interest and value. Thus, while the total number of medals described in the first edition was not more than 800, the second volume alone now describes about 1,260, and the first has risen from 800 to 1,300. This second part, as a simple addition to the original, might be thought to claim most notice at the hands of the reviewer, but the truth is, there is so much new matter in the first volume, that to take stock of that alone would require more space than we have at our disposal.

The number of medallists recorded in the first edition was 116. The number in this edition is 178. It is true that the great majority of these last can scarcely be said to be *known*, seeing that they sign their works with simple initials. When nothing further can be ascertained about the authors, M. Armand confines himself to copying down *literatim* the signature as he sees it, including (rather perhaps to the confusion of the uninitiated) the F or FF (*fecit, fieri fecit*) which commonly follow the initials of the artist. In the same volume appears a number of medallists who do not even sign their pieces, but who may be distinguished by some mark or design. Among these is especially to be noted the "Médailleur à l'Amour Captif," who made the beautiful medals of Jacoba da Correggio and Lucrezia Borgia. M. Armand rejects, we think with reason, the attribution by Friedländer of these medals to Filippino Lippi, as well as the attribution of them to Pomedello. Another of these interesting unidentified medallists is he who signs with the letter Φ. He is at present only known by a very beautiful medal of Andrea Gritti, one of the best portraits of the great Doge. Among the medallists who appear for the first time are Marande (who, as a Frenchman, has scarcely a right to appear in the

work); one of the Della Robbia, who is said to have made the medal of Savonarola (M. Armand supposes him to have been Ambrogio); Benedetto Ramelli, who executed two rare medals of Francis I.; Lysippus, supposed to be the nephew of Cristoforo Geremia, who is mentioned by Raphael of Volterra. Paladino, a wretched medallist, is interesting as the author of a large number of "restitutions" of the Popes. We think, however, that M. Armand has ascribed too large an *œuvre* to this artist. A careful examination of the Papal medals has convinced the writer that reverses of Paladino are often combined with obverses by a different hand. M. Armand has been misled by the resemblance of the obverses of some Papal medals to those which are signed by Paladino on the reverse. Thus both series have been ascribed to this medallist.

In arranging the anonymous medals, M. Armand has divided the time which his work embraces into different series, as—1st, earlier than the fourteenth century; 2nd, between the fourteenth and fifteenth centuries; 3rd, 1400 to 1450. He divides the rest of his time (1450—1600) into six parts of twenty-five years in length. Under these chronological divisions he has eleven geographical ones, eight for Italy, and one each for Germany and the north, Spain, and France. We think that the greater number of the medals which he attributes to the fourteenth century really belong to the succeeding era—those of Dante, for example, and the Ezzelini most unquestionably do so. There is, again, no reason to suppose that the medal of Ugo and Parisina d'Este was made in the lifetime of those two. There was nothing to connect them together previous to the discovery of their adultery, which was immediately followed by their execution. It is hardly likely that the medal was made before the death of Niccolò in 1441. The medal of Niccolò himself (by some attributed to Pisanello) is probably older.

Revue Numismatique, 3rd series, vol. i. It is with the greatest pleasure and no small hope that we welcome the reappearance of the *Revue Numismatique*. The last series received its death-blow in the terrible conflict of 1870; and the deaths of M. de Longpérier and M. de Sanley were of evil augury for the future of French numismatics. But MM. Waddington and F. Lenormant still remain, and since 1870 several younger French numismatists, such as M. Schlumberger and M. Muret, have been producing excellent work. There seems, therefore, no reason why France should not again take her due place in numismatics as in other things.

The editors of the new issue are Messrs. Anatole de Barthélemy, Schlumberger, and E. Babelon; the committee of

publication includes the names of Messrs. Deloche, F. Lenormant, Ch. Robert, De Vogué, Waddington, De Witte, and Chabouillet.

Part 1 contains:—

A. de Barthélemy. Unpublished Gallic coins and rectifications.

F. Lenormant. On a coin of Sybaris, bearing the curious inscription **NIKA**, which M. Lenormant considers to have reference to gymnastic contests.

W. H. Waddington. Numismatics of Isauria and Lycaonia. A valuable collection of coins not published in Mionnet.

E. Muret. Rare and unpublished ancient coins from the French collection. Among these the coin of Patraeus, that of Eleuthernae in Crete, and two coins of uncertain place are especially noteworthy.

A. Chabouillet. Roman medallions recently acquired by the French museum.

L. Blancard. Some obscure points in the coinage of Charles VIII.

Part 2 contains:—

F. Lenormant. The Cretan archer: comparing the type of the coin of Eleuthernae published by M. Muret with a figure on a bronze plate.

E. Babelon. Greek royal coins. Among these is a gold tetradrachm, which M. Babelon attributes to an alliance between Ptolemy Soter and Seleucus I. The piece has no legend; but most specimens come from India or the far East. We should prefer to call it a gold coin struck by Seleucus with the types of Alexander the Great.

J. Roman. Merovingian coins of the towns of Embrun and Gap.

A. Castan. Merovingian triens of Antro (Franche-Comté).

L. Blancard. The Gros Tournois an imitation of a Christian coin of Acre.

L. Dosechamps de Pas. The first coins of the Counts of Flanders, *à propos* of an unpublished coin of Sens.


P. de Cessac. Unpublished denier of Hugues XI. de Lusignan, Comte de la Marche.

L. Maxe-Werly. Unpublished or little-known baronial coins of France.

A. Sorbin-Dorigny. Rights of coinage in the non-Mussulman communities of the Ottoman Empire.

Annuaire de la Société Française de Numismatique et d'Archéologie, 1883.

Part 1 contains :—

J. P. Six. Dropion of Paeonia. A base belonging to a statue of this king has been found at Olympia. M. Six proposes to attribute to him some Paeonian coins which bear the monogram .

R. Garrucci. An Etruscan coin of the Borgia Museum. Types: *Obv.*, head of Pallas; *Rev.*, a crescent.

E. Babelon. Coins of Cilicia. Rare imperial coins of Cilician cities.

Ponton d'Amécourt and Moré de Préviala. Merovingian coins of Gévaudan.

E. Caron. A hoard of the 14th century discovered at Paris.

H. Sauvage. Unpublished dirhems of the Seljuks of Roum.

Part 2 contains :—

F. Imhoof-Blumer. Mallos, Megarsos, Antiochia, ad Pyramum. The writer discusses these cities with his accustomed thoroughness from the geographical and numismatic stand-points. He shows that the coins inscribed **MAP** or **MAPA**, bearing the types of a winged deity and a swan or pyramid, belong not to Marium in Cyprus but to Mallus in Cilicia. This rectification was made in the collection of the British Museum many years ago.

Ponton d'Amécourt and Moré de Préviala. Merovingian coins of Gévaudan (continued).

G. Leroy. A mint at Melun in the sixteenth century.

The *Zeitschrift für Numismatik*, vol. x. part 4, contains :—

H. Dannenberg. A find of Tournois at Wittmund, coins of the Counts of Berg, Dukes of Brahmant, &c., of the fifteenth century; also two finds at Vietmannsdorf and Herzprung respectively.

J. Friedländer. A medallion of Peter de Domo Fani.

E. Bahrfeldt. On the find at Daelia. Coins of Brandenburg, Meissen, and Saxony.

F. Friedensburg. The heller of Neisse in Silesia.

H. Dannenberg. A picture bearing on numismatics.

F. Imhoof-Blumer. Points in the numismatics of Cilicia :—

I. On the coins of Hieropolis, Castabala, and the geographical position of the various towns called Castabala.

II. Coins and eras of the Cilician towns Augusta, Mopsuestia, and Pompeiopolis.

A. von Sallet. The denarii of Margrave Otto II. of Brandenburg.

The same. Small corrections of papers previously published.

Vol. xi. part 1 contains:—

A. Kotelmann. History of the numismatics of Brandenburg under the lines of Wittelbach and Luxemburg, and the two first Hohenzollerns.

Louis Blancard. The Gros Tournais an imitation of a coin of Acre struck by the Christians with Arabic inscription.

J. Friedländer. Greek proper names on coins. Additions and corrections to the Lexicon of Pape.

J. Friedländer. Acquisitions of the Royal collection at Berlin in 1882. Those acquisitions are not on the same grand scale as those of recent years, but still contain interesting things, including a splendid gold stater of Panticapaum.

A. Erman. Oriental coins acquired by the same Cabinet.

Th. Mommsen. The denarius of Q. Salvidienus, and the boards of Peccioli and Metz.

Vol. xi. part 2 contains:—

H. Dannenberg. On the numismatics of the Harz.

F. Friedensburg. The earliest coins of the Electors of the Palatinate Otto Heinrich and Philip.

Fr. Barth. The find at Lioherose.

A. von Sallet. German cast medals of the sixteenth and the beginning of the seventeenth centuries.

Th. Mommsen. The hoard of denarii at Ossolaro.

Fr. Hultsch. Approximate determination of the proportions of gold and silver in certain electrum coins.

A. von Sallet. Fulvia or Octavia? Discussion of the portrait on an unpublished aureus of Mark Antony.

C. F. K.

XVIII.

ATHENIAN COIN-ENGRAVERS IN ITALY.

AMONG the coins of Magna Græcia, dating from the best age of Greek art, there is a group which shows a marked difference from the general qualities of the schools of Italy and Sicily. Instead of the gem-engraver's influence and the sameness of type, however varied in beautiful details, which mark the Western school, we notice the influence of sculpture and the variety of treatment which characterize the school of Groeco. The work of the money of Thurium, recolonised by Athens in the age of Perikles, has naturally suggested the source of this special character, nowhere more marked than in this city. Yet, so far as I am aware, no one has yet attempted to link together the various exceptional issues of Italy which bear out the hypothesis of a direct Athenian influence, though the coinage of Terina supplies exactly the evidence that is needed.

It may be objected *a priori* that the school of the West was strong enough to produce great work in two styles; its own, rich and delicate, and that far more vigorous manner which marks the art of Hellas. But if we compare the Syracusan dekadrachms with the finest copies of them in the money of the Locri Opuntii, Pheneus, and Messene, we shall see at once that even in copying with an inferior technical skill, the engravers of Greece Proper

excelled in strength, simplicity, and purity, the originals which they admired and followed. Consequently, we must allow them that higher expression which a practised eye will recognise in all they executed as an unfailing test of authorship, a test strengthened in the present instance by direct and probable links which make up a logical chain not to be disregarded.

The coins of Terina afford us evidence only second in directness to that derived from the neighbouring town of Thurium, though more forcible. First, they have the peculiar art which comes in like an Athenian colony in Magna Græcia; secondly, the theme in which their engravers delight, the figure of Nike, is not a "memory-sketch," like the recumbent Herakles of Croton and Heraclea, suggested by a work of art, but is developed in a free series of variations, and thus indicates a strong school. In the third place, the subject has a remarkable resemblance in some of its forms to the exquisite contemporary balustrade-relief of the Temple of Niko Apteros, at Athens, while the earliest coin of Terina, dating about *n.c.* 480, presents the goddess in the wingless shape with her name written beside her figure. Of course, there is much to explain in this agreement. We do not know of an older temple of Nike Apteros at Athens than the famous one dating from before *cir.* *n.c.* 400. It is a startling hypothesis that an engraver carried away the general form of the reliefs of the balustrade, and reproduced them in another country. Yet a later temple generally preserved an older worship, and we must look on the relief of the temple at Athens as typical of the school rather than as a solitary example, merely because to us it was long so. A new instance is rather a proof of the individual force of a style than of mere copying,

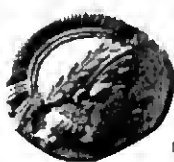
and no one who had the facility of the great engravers of Terina would have condescended to copy a relief. The conscious or unconscious copying of coins, especially of the same series, is obviously another matter, due to the inevitable influence of the older type or to popular feeling, and is the key to the slow change of style in coin-art.

The coins here engraved (Pls. XI., XII.) do not need a detailed description, the object of this essay being artistic and not numismatic in the special sense, and suggestive, with no dream of finality.

The earliest coin, like all the rest, except where specified, is a didrachm (Pl. XI. No. 1). The date is about B.C. 480, the art the later archaic, much resembling the Æginetan style. The obverse bears a head in profile bound with a simple diadem, resembling the Syracusan coins of the time of Gelon. Around it is the name of the goddess Terina. Her place in mythology is mere matter of speculation. Unhappily, Pindar, in his remaining Odes, commemorates no citizen of Terina, and speculation is useless. On the reverse is a dignified form of Niko, accompanied by her name ΑΝΖΗ; she is clad in a long chiton, and carries an olive-branch, while the whole subject is encircled by a wreath of olive.

The works of the period next following do not present anything bearing on the present subject. It is when we reach the age of finest art that we find two groups of didrachms, the earlier marked by the engraver's initial Φ, the later by a pupil who signs Π. The works of the earlier master, Φ, are in style somewhat before B.C. 400. The severity of the transitional age is not wholly lost by him, though when he is severe, he is so by choice, not of necessity: and one type of the Terina head, that of Pl. XI. Nos. 4, 5, 6, is strikingly similar in composition to some of the

Syracusan transitional tetradrachms. The heads require no detailed analysis. They are remarkable for beauty, skill, and balance, and the presence of two types; that already noticed and another (Pl. XI. 2, 3), surrounded by an exquisitely drawn wreath of wild olive, affording another proof of the power in variety that marks the engravers of Terina. The reverse presents Nike in changing attitudes of a singular playful grace, alone paralleled by the similar types of the Fountain Nymph of the Thessalian Larissa. We see her resting on an overturned hydria; seated on a base and drawing water with the same vessel from the fountain in the wall; in a chair, throwing and catching two balls on the back of her hand, repeated in a different form at Larissa, and also in two instances seated on a base. In all subjects but that of the game of ball she holds the caduceus. In the first case a little bird rests on her hand (No. 2), in the last but one (No. 5), she has a wreath besides the herald's staff. The composition in all cases is masterly. In the first instance (Pl. XI. 2, XII. 1), Nike has just alighted, and sits with perfect balance, her half-open wings aiding her in a position otherwise difficult to maintain. Her drapery is still drawn back by the wind. The figure is seen beneath the drapery, in the manner of the balustrade in the Temple of Niko Apteros. A stream flows from the overturned hydria, and a flower springs up from the watered earth. The skill of the work as a whole is marvellous. The large curves suggested and returning inwards, the equal proportion of the subject to the space thus naturally filled in, and little subtleties such as the manner in which the shoulder of the right wing forms a kind of nimbus for the head, are truly admirable. With all this care for detail the work is large. Note especially the grand forms of the wings depicted with the usual sagacity





of the Greeks in the inner side, where the orders of the feathers are longer in appearance than on the outer side. The Niko at the fountain is as masterly in poise. She balances the weight of the hydria hold on her right arm by striking the foot of the herald's staff into the ground behind, and resting her right foot against the base on which she sits. The subject is unusual in the background of delicately drawn stone wall, and the swan swimming in the basin beneath the fountain. The third type is the game of ball, another picture of every-day life, yet more playful than the last, leading us from the motives of sterner art to those of the terra-cottas, though treated more severely than the familiar post-Alexandrine works in that material. The remaining forms are similar, but the subjects more dignified.

A smaller coin (Pl. XI. No. 7), signed ΦΙΛΙΣ, bearing the types of the head of Terina and Nike seated on a base wreathed with olive, a bird on her hand, seems a little later in date. The type of head is not dissimilar from that surrounded by the wreath (Pl. XI. No. 2, 3), yet has more affinity with the Mænad's head on the coin of Elea or Velia, signed Φ (Pl. XI. No. 13), to be presently noticed as possibly a work of the Terinaean Φ. Is ΦΙΛΙΣ for ΦΙΛΙΣΤΙΩΝ? That name occurs on coins of Elea about two generations later, and it may be suggested very tentatively that if the Φ of Elea is the Terinaean ΦΙΛΙΣ, then the later Eleian engraver may possibly have been grandson of the Terinaean, according to the Greek fashion of giving a name in alternate generations. The possible identity of Φ at Terina and Elea with ΦΙΛΙΣ at Terina has nothing to do artistically with the descent of ΦΙΛΙΣΤΙΩΝ, who has a purely Italian style, like all his contemporaries of Magna Græcia.

The mention of the coin of Elea, possibly by the engraver of Terina, suggests the comparison of a group of coins signed Φ , of other towns of Lower Italy, and clearly of the same school, if not by the same hand. These are of Heraclea, Thurium, Elea, and Pandosia. A careful study shows points of contact with the money of Terina signed Φ throughout this group, which stands apart from the surrounding work. We must note that the obverse of the coin of Heraclea (Pl. XI. No. 9) is signed Σ , apparently the initial of another artist of the same school. Certainly, the hand is not that of the Terinaean, but the composition of the reverse, signed Φ , while true to the Attic instinct of the age of Pheidias in representing a supreme struggle, is for skill of composition quite comperable to the Terinaean series of the engraver Φ . The subject is too dissimilar for more than a conjecture of similar origin, and the size of the head of Herakles is unlike the better proportion of the coins compared. While the matter is thus in suspense, an additional evidence for identical authorship is seen in the small coin of Heraclea signed Φ (No. 8), which, in the obverse, particularly in the form of the eye, resembles that of the Terina series of Φ , while the exceptional springing lion of Elea (No. 13) is like the same subject of the reverse. The head of Athene of Thurium (No. 10), copied at Neapolis (No. 12), is acknowledged to be of Attic style. It is signed Φ . The similarity to the coin of Terina (No. 2) is very striking. The reverse, a butting hull, is too different a type from the Niko for us to institute a comparison, except in the skill of composition, which is singularly shown in the position of the fish in the exergue, which fits the round of the coin, and is exceptional when a single fish is represented. The little bird beneath the hull again recalls Terina. The signature at Thurium occurs in a long series, in which the helmet of



Athene is bound with the olive-wreath or adorned with the figure of Scylla, and which includes the well-known splendid tetradrachm, the signature on which is doubtful (Head, "Brit. Mus. Guide," Pl. 25, 17). These coins may be classed together by the style of the head of Athene and the drawing of the bull, particularly in the position of the head and the treatment of the dewlap. One specimen of the olive-wreath group has the letters Φ PY on the reverse (Pl. XI. 11), recalling the $\Phi PY \Gamma I A$ (Phrygillos) of Syracuse, whose work is a little later; but the style of the animal is so different from that of Φ that it may reasonably be conjectured that ΦPY worked with Φ , and wrote his name more fully for distinction. Some may prefer to identify the two, but the balance is rather in favour of $\Phi I A I \Sigma$ as the longer form of Φ , at least at Terina.

Probably, the splendid three-quarter face of Hera Lakinia, at Pandosia (No. 14), is by the artist of Terina; the reverse is signed Φ , and presents a not less beautiful subject, Pan seated on a rock before a term, his hound crouched at his feet. It is very hard to compare these works with the Terina subjects. Perhaps it would be best to say that both are by engravers of the highest power in design, and specially noteworthy for skill in composition. Yet there is something in the head of Hera, and more in the calm repose of the resting hunter, which recalls the delightful subjects of Terina; the figure, for pose and fulness of detail, may be especially compared with the fountain subject (No. 3).

The coins of Terina signed Γ (Pl. XII.), are in part contemporary with, in part later than, those with Φ . We may venture to think them works of a pupil and in general not equal in force and beauty to those of his master. In the heads of Terina he follows the type which is not sur-

rounded by a wreath (comp. Pl. XII. 1—8, with Pl. XI. 4—6), and the execution is that of a copyist, unmistakably inferior. One of these heads has for reverse the splendid figure of Nike resting on her hydria by the older artist (Pl. XII. 1), showing that at one time the two engravers worked together. Another example is combined with the reverse of Nike on a base in the manner of Φ (comp. Pl. XII. 2 with Pl. XI. 6). But the younger artist shows himself truly great in the signed reverse of the stooping Nike, which startlingly reminds us of the figures of the balustrade at the Temple of the wingless Victory. This is in all respects a most charming composition, though not so skilfully placed in the field as the works of the other artist. Nike is clad in a long chiton and a peplos, passing round her left arm, with which she supports her drapery as she stands in arrested movement, the herald's staff in her hand. In her figure partly seen through the drapery, the fall of her wings, and her whole attitude (Pl. XII. Nos. 3, 9), there is that perfect harmony that suggests a rhythmical series of movements, treated in the style of the balustrade-relief, indicating a strong influence, though not necessarily that of a particular work. In the other subjects, Nike is usually half-draped (Nos. 4—7); her figure is short, and her attitude in some cases too much bent (Nos. 7, 8). Three unsigned coins have been added (Nos. 10—12) partly for comparison (with Pl. XI. No. 7), which are probably the work of a second pupil of the engraver who signs Φ . The head is of a style wholly new to Terina and of a distinctly Sicilian character, as shown by the exaggerated lines of the throat; and the reverse, in one case dignified (Pl. XII. 10), is otherwise weak (Nos. 11, 12).

To sum up, we find in Lower Italy a distinctly

Athenian school, probably owing its first acclimatisation to Thurium. The greatest engraver or engravers of this school sign Φ , the abbreviation of the fuller form either $\Phi\Lambda\Gamma\Xi$ or less probably $\Phi\PY$. The works with the initial Φ form a series of Thurium, Terina, Elea, Hieraclea, and Pandosia. The distinct link with Athens is in the famous balustrade-relief of the Temple of Nike Apteros, worshipped in common at Athens and at Terina.

This is but a small contribution to our knowledge of the local schools of Greek art, but it is of use if it warn us not to disregard special characteristics when they occur in the midst of a local school. In another paper I hope to examine fully the evidence of the money of Thurium, which was apparently the earliest art-colony of Athens in the West.

REGINALD STUART POOLE.

XIX.

FURTHER NOTICE OF SOME ROMAN COINS DISCOVERED IN LIME STREET, LONDON.

On a former occasion,¹ I had, through the kindness of Mr. John E. Price, F.S.A., Mr. Alfred White, F.S.A., and Mr. F. G. Wilson Price, F.S.A., the opportunity of giving some account of a large hoard of denarii found in Lime Street. At that time it seemed probable that by far the greater part of the coins had fallen into the hands of these three gentlemen, by whose courtesy I was enabled to give a description of the hoard.

It now, however, appears that a very considerable number of the coins were diverted into another channel, and are now in the possession of a member of this society, Mr. Thomas Bliss, who has kindly submitted them for my examination. I am thus enabled largely to supplement the list of coins, both by the addition of new types to those of the various emperors and empresses recorded in my former list, and of coins struck under several emperors whose names do not there appear.

I have thought it best to give in this supplemental list all the varieties in Mr. Bliss's possession, though in many instances the same types are recorded in my first list as having occurred in the hoard. The series, as before,

¹ "Num. Chron.," Third Series, vol. ii. p. 57.

begins with Commodus, but comprises coins of Trajan Decius, so that the hoard cannot have been deposited earlier than about A.D. 249 or 250. In my former notice, I have inferred, from the absence of coins of this emperor, that the date could not be much later than A.D. 248, and attributed the deposit of the hoard to the period of confusion which ensued in the Roman empire after the death of the two Philips. The fact of there being these coins of their successor present in the hoard does not, however, materially affect my inference.

In my former notice, I observed that coins such as were rarely discovered in Britain were present in this deposit, and I instanced those of Albinus, Julia Paula, Aquilia Severa, and Pupienus. To these names may now be added those of Macrinus, Diadumenianus, Gordianus Africanus II., and Balbinus. Of these coins I have given the reverse legends and types, besides the reference to Cohen, which, in the case of the majority of the coins, seems to be all that is necessary. Some of these, however, are by no means common coins, and, in a few instances, varieties exist which are not to be found in the pages of Cohen, and which I have, therefore, placed on record.

An interesting object, found, it is presumed, with the coins, is a thin ring of gold, now somewhat oval in shape, but of an average diameter of about $\frac{3}{4}$ inch. Externally, it is somewhat irregularly octagonal. It is only about $\frac{1}{15}$ inch in thickness, and its weight does not exceed 18 grains.

I have only to add that the total number of the Lime Street coins described in this and my former notice of the find amounts to nearly 500.

JOHN EVANS.

COMMODUS. Cohen, 325.

SEVERUS. C., 62, 78, 126, 181, 208, 216, 230 (2), 273, 285, 291, 304, 324, 361, 400. As No. 232, but IMP. VII., and the Victory carrying a wreath and a trophy.
As No. 366, but reading ROMA AETERNA.

JULIA DOMNA. C., 31, 32, 33 (2), 83, 90, 96 large, 111 large, 112, 119.

CARACALLA. C., 38, 69, 139, 141, 154, 156, 171 large, 255, 360 (2).

GETA. C., 36, 48, 56, 77, 111.

MACRINUS. PONTIF. MAX. TR. P. COS. P. P. Abundantia seated, holding a cornucopie and two ears of corn above a modius. C., 27.

DIADUMENIANUS. PRINC. IVVENTVTIS. Diadumenian standing facing, but looking to r., holding a standard and sceptre; behind, two standards. C., 3.

ELAGABALUS. C., 1 (2 varieties), 43, 52, 55, 114, 181, 150.

JULIA PAULA. C., 9.

JULIA SOÆMIAS. C., 8.

JULIA MESA. C., 14, 17 (3).

ALEXANDER SEVERUS. C., 4 (4), 49, 61, 70, 78, 107, 115, 129, 143 (2), 195 (2), 198, 141, 163, 172 (2), but reading IMP. SEV. ALEXAND. AVG; 189, 192, 197 (2), 211, 222.

JULIA MAMEA. C., 5 (2), 27 (3), 29 (2).

MAXIMINUS. C., 14, 28, 29, 37.

Obr.—MAXIMINVS PIVS AVG. GERM. Lauroate bust.

Rev.—VICTORIA AVG. Victory marching to l., holding wreath and palm-branch.

GORMIANUS AFRICANUS II. PROVIDENTIA AVGG. Providentia standing to l., holding a wand and a cornucopie, her left arm resting on a column, at her feet a globe. C., 2.

BALBINUS. P. M. TR. P. COS. II. P. P. The emperor l., holding a branch and a sceptre. C. 10.

PAPIENUS. PAX PVBLICA. Peace seated, holding an olive-branch and sceptre. C., 14.

GORDIAN III. C., 6, 7 (2), 9 (3), 15 (5), 25 (3), Supp. 7 (2), 39 (3), 40, 49 (5), 52 (3), 57, 59, 62, 64 (3), 70, 75, 82, 85, 91 (2), 94, 107 (2), 109, 114 (5), 125 (2), 126, 128 (2), 136, 143 (3), 145 (2), 151, 152 (2), 160, 161, 163, 166 (6).

PHILIP I. C., 6 (2), 9 (4), 10 (2), 14 (2), 16 (5), 22, 38, 44, 50 (2), 52 (3), 72 (6), 83, 89, 93, 97 (3), 103, 109 (3).

OTACILIA SEVERA. C., 3 (2), 6, 7, 20 (2), 25 (2).

PHILIP II. C., 30 (3), 33, 34, 48.

TRAJANUS DECIUS. C., 2, 26.



XX.

SAXON COINS FOUND IN IRELAND.

I PUBLISHED in the "Numismatic Chronicle" (vol. ii. Third Series, p. 103) a descriptive catalogua of nine coins of Eadweard the Elder, and eight of Æthelstan, his son and immediate successor.

This small hoard, now in the Royal Irish Academy, contributed five additional names to the list of Eadweard's and three to the list of Æthelstan's moneyers in Ruding's third edition, 4to, 1840.

I have now to describe thirty-one¹ Saxon coins found in the County Dublin, in April, 1883, along with a small ingot or cast bar of silver, and also a piece of silver near three inches in length, its surface ornamented with spiral fluting well executed, not the result of twisting. This slightly curved fragment seems to be a portion of a torque, as each end had been cut with a chisel. There was a third

¹ Two of Æthelstan's coins, moneyer Pinele, are duplicates of 9 and 10.

piece of silver, about an inch in length, and as thick as a goose quill, with numerous indentations made on its surface with a punch, and arranged in lines. It was probably a portion of a Saxon armlet.

EADWEARD THE ELDER.—A.D. 901—924.

Type. (No. 2, Hawkins.) *Obv.* King's head to the left, within a plain circle. *Rev.* Moneyer's name in two lines, with three crosses between the lines.

- | | | | |
|----|--|--------------------|--------------|
| 1. | ✠EADVVEARD REX | DEORV ✠ ✠ ✠ VALDMÖ | Grains. 23·7 |
| | A ✠ above the upper, and three pellets, two and one, under the lower line. | | |

Type. (No. 4, Hawkins.) *Obv.* A ✠ in the centre, within a plain circle. *Rev.* Moneyer's name in two lines. Nos. 3 and 9 have a single pellet above the upper and under the lower line; No. 5, three pellets above and only one under the name; all the others have three pellets above and under the name (see Ruding, XVI. 7 and 28).

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|-----|----------------|----------------------|------|
| 2. | ✠EADVVEARD REX | πBBT ✠ ✠ ✠ MON | 24·5 |
| 3. | „ | BEAHS ✠ ✠ ✠ TANMO | 24·2 |
| 4. | „ | BEORN ✠ ✠ ✠ EREMÖ | 21·2 |
| 5. | „ | BEORN ✠ ✠ ✠ REDMÖ | 24·5 |
| 6. | ✠EADVVEARDE X | BERN ✠ ✠ ✠ GARMÖ | 18· |
| 7. | ✠EADVVEARD REX | EALHS ✠ ✠ ✠ TANMO | 23·8 |
| 8. | „ | FRİDEB ✠ ✠ ✠ RHTMÖ | 24·6 |
| 9. | „ | FRİDEB ✠ ✠ ✠ RHTMÖ ✠ | 24·7 |
| 10. | „ | VVEAL ✠ ✠ ✠ DELMMÖ | 21·7 |
| 11. | „ | VVIL ✠ ✠ ✠ LVFM | 22·9 |
| 12. | ✠EVDVVEARD REX | OIEIOI ✠ ✠ ✠ DIOΛI | 21·2 |
| 13. | ✠EVDVVERD REX | EDMAÖ ✠ ✠ ✠ OMЯE | 24·5 |

Type. (No. 6, Hawkins.) *Obv.* Same as type 4.

Rev. Moneyer's name in one line with foliage.

- | | | | |
|-----|----------------|---------|------|
| 14. | ✠EADVVEARD REX | HEREMOD | 24·2 |
|-----|----------------|---------|------|

The type of this very fine coin is accurately represented in Ruding, Pl. XXVIII. Fig. 1, and a variety of this type in Pl. XVI. Fig. 9.

Heremod is probably a Danish name, same as "Hermod, the messenger of the gods."² The symbol under the name has eight rays terminated by dots; it is identical with some of the symbols called "suns and roses" by Worsaae in his description, p. 183, of the devices on the fourth and fifth bands of the gold horn, Fig. 227. If the eight rays be a symbol of the sun, it is possible that the "foliage" may be intended to represent wings as a symbol of the Mercury of Scandinavian mythology.

The average weight of the fourteen coins is 23·3 grains; eight of them weigh above 24 grains each.

Hawkins has DEORVALD (type 4); BEORNRED and VVEALDELM are only varieties of BIORNRED and VVEALDHELM in Hawkins; BERNGAR and VVILLVF are now first published.

The reverse of No. 12 is unintelligible; the name on No. 13 reads OAMDE-ERMO, retrograde. The first π in the king's name is inverted on these two coins.

ÆTHELSTAN, OR ETHELSTAN.—A.D. 924—940, SON AND SUCCESSOR OF EADWEARD.

Type. (No. 5, Hawkins.) *Obv.* A ✠ in the centre within a plain circle. *Rev.* Moneyer's name in two lines. No mint is mentioned on these coins. No. 1 has a ✠ above the upper, and an amulet below the lower line. No. 3 has a single pellet above the upper and under the lower line; all the others have three pellets above and below the name. See Ruding, XVII. 14.

			Grains.
1. ✠ÆDELSTAN REX	ALFEA ✠✠✠VMON	16·9	
2. "	ALHS ✠✠✠T.A.NM	20·3	
3. ✠AID✠✠STAN REX	AREM ✠✠✠ONET	21·8	
4. ✠AITDELSTAN REX	ERIC: ✠✠✠MONET	22·3	

² The "Industrial Arts of Denmark," p. 178. By J. A. A. Worsaae. London. 1882.

			Grains.
5. *ÆDELSTAN RE	LAND	***VOMON	23·8
6. *ÆDELSTAN REX	MANM	***ONETA	25·3
7. *ÆDELSTAN RE	PINE	***LEMÖ	23·9
8. "	"	***LEMÖ	21·5
9. "	"	***TEMÖ	22·4
10. *ÆDELSTAN REX	ÖVRL	***TEMÖ	20·6
11. *ÆDELSTAN RE	VVIL	***LVFM	23·

Hawkins gives the name ALFEAV, as moneyer, type 3. ALHSTAN is probably the same as EALHSTAN on No. 7 of Eadweard's coins, and LANDVC, the letter A inverted, is the same as LANDAC (5) in Hawkins's list.

The Roman P on Saxon coins in the names of moneyers and of places of mintage is frequently read as W. It would be satisfactory to know if there is any rule for such reading, because I find in Hawkins's list of Athelstan's moneyers the names Pauls, Paulus, and Pilit, all of type 5, and in the same list, Winele (5). In Ruding (Pl. XVII. Fig. 14) there is a coin of Æthelstan with PINELE MÖ. on the reverse, and the letter L inverted as on No. 9 in the preceding list, but the name Winele only is in the list of moneyers. It seems to me that Pinele is as intelligible as Winele.

The formation of letters by the combination of separate punches is well illustrated by the different forms of the letter S, on 4 and 5, and of C on the reverses of 4, 5, and 10; and examples of inverted letters A, being represented by V, occur on 12 and 13 of Eadweard's coins; and on the reverse of 9, L is inverted in Pinele.

Type. (No. 7, Hawkins.) "*Obv.* Small cross, with king's titles as Rex totius Britanniae or Saxorum.
Rev. Small cross, with sometimes an additional ornament, moneyer's name, title, and mint. A few coins of this type have the king's name and titles on both sides."

12. ✠EDELSTAN REX TO BRIT ✠REGNOLD Mō
EFORŷo: 22·7 grs.

The form of M on the reverse is unusual, and the Saxon Y is very different from the P on 9, which Ruding reads as W.

Type. (No. 8, Hawkins.) "Same as 7, except that instead of the small cross there is a rosette of dots on one side or other. This is not distinguished from type 7 in our list of mints and moneyers."

13. ✠EDELSTAN RE✠TO BR ✠OSLŶE MōN LEIEE✠
22·7.

The rosette on the reverse only of this coin consists of a dot within a circle of eight dots.

The average weight of the fifteen coins, including two duplicates, is 22·3 grains, which is one grain less than the average weight of Eadweard's fourteen coins.

The following names, Alhstan, Eric, Man, and Thurlac, are additions to Hawkins's List of Aethelstan's moneyers.

ST. PETER, ABOUT 905 TO 941.

Type. (No. 1, Hawkins.) "Obv. A sword across the field, to the right or to the left, between the two lines of the legend; between the letters of the lower line is the unknown object which on Sitric's coins has been called a hammer. Rev. A cross with a pellet in each quarter."

14. SCIPE | sword ✠ | TR, hammer, HIO
✠EōBōQŶRōXōCōEōIō 17·2

○✠○ above the upper line, and ○○ below the lower (see Ruding, Pl. XII. Fig. 4).

15. The coin represented in the woodcut at the head of this article weighs 22·7 grains, which is 5·5 more than the penny of St. Peter. The cross on the reverse resembles that on the coins of St. Eadmund in Ruding (Pl. XII. Figs. 1 to 6, and Hawkins, 139 and 606), and I was at one time inclined to regard the penny as being of St. Eadmund.

There is, however, much difficulty in appropriating this piece with any degree of confidence. The type of the obverse differs materially from that of any of the known coins of St. Eadmund, while the reverse, both in type and character of workmanship, closely approximates to that of some of the coins bearing the name of that saint and the usual \bar{A} on the obverse. But the obverse of the coin now under consideration bears a remarkable resemblance to the reverse of some coins of Eadweard the Elder (Ruding, Pl. XVI. 12 and 13), on one of which the name of the moneyer OZVLF occurs; and Mr. Evans has suggested that what I have described as the obverse of the coin may, after all, be a blundered imitation of the coin minted by Osulf, while the reverse, if not taken from the obverse of a coin of Eadweard, may be a barbarous imitation of the reverse of a St. Eadmund penny. The size is also smaller than usual with the coins of Eadweard, though the same as the usual run of those of St. Eadmund.

AQUILLA SMITH.

XXI.

THE MEDALLION OF PHILIBERT THE FAIR OF SAVOY AND MARGARET OF AUSTRIA.

IN his monograph on the medal of Philibert the Fair and Margaret of Austria, M. Natalis Rondot has rendered a very important contribution to the study of this fascinating branch of art. In former publications the writer has shown his great zeal in searching out from the inmost recesses the history of the coinage and medals of Lyons, notably in the case of the famous medallion of Louis XII. and Anne of Brittany, and also of the works of Niccolo Fiorentino while domiciled in that city. But with regard to the medal in question of Philibert and Margaret, M. Rondot has now ascertained and published not only the name of the author of that piece, but the whole circumstances of its production, even to the metals in which both the original "proof" and the finished presentation medal were cast.¹ He also gives a description of all the examples of the work now known to exist, whether in public or private collections, with the exact measurement and weight of each, thus affording most valuable evidence as to the probable number executed, due allowance being made for the por-

¹ It may be noticed that M. Armand, to whom M. Rondot had communicated his discovery, gives Marende a doubtful place among his "*Médailleurs italiens*" (2nd edition, i. 113); but M. Rondot contests this view of his nationality, showing that Bonrg was the home not only of himself, but of his family for many generations.



tion lost to view or no longer in existence. It appears, then, that the goldsmith to whom the execution of this medal was entrusted was one Jean Marende, of Bourg-en-Bresse, into which city the young Duke and Duchess of Savoy were about to make their solemn entry on August 2nd, 1502, nearly a year after their marriage. The registers of the Syndics and Council of Bourg, though in an imperfect state, are the documents which have chiefly furnished the information on the subject. Following the precedents established at Lyons in 1494 and 1500, when Anne of Brittany entered the city in state, first as the wife of Charles VIII., and secondly of Louis XII., it was decided by the authorities of Bourg to present Margaret with a medal of gold. After due deliberation it was settled that the weight of the medal, fashioned after the pattern of a specimen in lead, first submitted to the Council, should be that of 140 ducats (about 490 grammes).

M. Rondot takes great pains to show that this first specimen piece does not correspond in respect of the legends and of some minor points with the medal in its ultimate form. Unfortunately, both the lead and the gold originals have been lost, but in a bronze example now preserved in the Lyons Museum of Art and Industry, and formerly in the rich collection of the Prince of Montenuovo, M. Rondot thinks that a casting from Marende's first lead is to be found. It is in red bronze, and measures 106.1 mm. in diameter. M. Rondot cites in all twenty-nine specimens of the medal from different collections, this being the total number now known to exist. They are chiefly in plain bronze, but also in silver, silver gilt, bronze gilt, bronze silvered, brass, and lead, the diameter varying from 98.5 to 105. The largest, therefore, is rather less than the bronze model of the earliest type above referred

to in the Art Museum of Lyons. It is to be noticed that there is much difference between these twenty-nine examples with respect to the small ornamentation of the daisies and love-knots in the field, the full number of these—twenty-two, representing, perhaps, the common ages of the Duke and Duchess—being curtailed in various ways. Some of these variations may be attributed to defects in the casting, but M. Rondot considers that the original “proof” in lead had the full number of twenty-two, and that in the medal’s final form the number was reduced to nineteen.

Had the records of the contract with Marende been perfect, we should probably have known the exact number of medals prepared for presentation or distribution in gold, silver, or bronze, according to the rank of the recipients, but, unfortunately, they are not. However, among the twenty-nine examples described in the text only two are of silver, but of these one is partly enamelled, the spaces between the busts, the devices, and the legend being so filled up. This piece has no reverse, and the back is finished off in concentric circles, produced by turning the metal in a lathe.² But unless it be the half of a complete medal cut in two, it can hardly have been destined for presentation, as M. Rondot supposes, in this incomplete state. It is much more probable that this was an original casting of one side only, kept by the goldsmith as a memorial of his work, and either enamelled by him at the time or by some subsequent owner. One other specimen of bronze silvered, in the Turin Museum, is also enamelled, but the quality is inferior to that on the silver medal.

² Italian plaques were sometimes finished in this way at the back.

M. Rondot suggests from the analogy of these two pieces that the gold medal itself may also have been enamelled, and his opinion that it was so is strengthened by the observation that in the bronzo examples the devices appear to stand out in too strong relief. This defect, he thinks, would not have occurred if it had not been intended to overlay the lower part or base of the medal with enamel. The fact that enamelled gold medals were of frequent occurrence in Germany later in the century does not bear much on the question, and as nothing appears to be said about such additional decoration in the archives of Bourg, further evidence is necessary to decide the point. But it is easy to take one more step in the way of conjecture, and that is that if Margaret's medal was enamelled, that of Louis XII. and Anne of Brittany was also.

The history of the second specimen in silver, or rather silver gilt, is interesting as giving some guarantee of authenticity, though it is to be feared that its size (98.5 mm.), to be noticed hereafter, is fatal to such a claim. The medal is at Bourg, in the collection of M. A. Bouvier. It was preserved up to the time of the Revolution in the Convent of the Augustins at Brou, and they, according to tradition, received it from the hand of Margaret of Austria herself. At the time of the Revolution it was given by the last Prior of the Augustins to a female relative, who in turn presented it to the father of its present possessor.

Another example in brass, with only the obverse, and with concentric circles at the back, reaches the extraordinary measurement of 113 mm., but it seems by some flattening process to have gained in circumference what it has lost in solidity, its *maximum* thickness being only 2 mm.

The comparison of so many examples of the same medal

affords a convenient opportunity of examining the value of measurement as a test of authenticity. Taking, therefore, the bronze specimens, if we single out those described as "fine" or "very fine," we get the following diameters :—

	mm.
Collection, G. Dreyfus (Paris)	103
" PP. Jésuites (Lyoas)	103·7
South Kensington Museum (bronze gilt) . .	101·6
Collection, J. C. Robinson (London) ³ . .	102
" Austrian Institute (Vienna)	103
" Prince John II. of Liechtenstein (Vienna)	103·2
Milan Museum	105
Berlin Museum	103·2

Those in the Cabinet de France and the royal collection at Brussels are also said to be "fine," but, at the same time, "retouched," and they are therefore excluded. The size, however, is small in both cases.

The average diameter of these eight undoubted examples is therefore 103. M. Rondot is not certain that all the bronze specimens he cites are genuine, and probably at least three or four are not. Copies of this medal (as of many others) were made about the middle of the seventeenth century, the casting being good, but the execution rather finer than that of the originals.

If we now turn to the silver and lead medals, we find the case thus :—

	mm.
1. Turin Cabinet (silver, enamelled, obverse only)	105
2. Collection Boavie at Bourg (silver gilt) . .	98·5
3. Turin Cabinet (lead, obverse only)	102·5

It thus appears (1) that the full size, both for silver and bronze, is 105; and (2) that any medal under 101 is of

³ The autotype illustration is taken from this medal, which has been kindly lent by Mr. Robinson for the purpose.

doubtful authenticity, seeing that a *surmoulé* of this size would suffer a reduction of about 2 mm., and it is stated by M. Rondot that re-castings vary from 99·5 to 101·5.

When a medal is freshly cast it generally has a larger rim than the fonndor intends it to retain, and this superfluous metal is got rid of by filing or "turning" it off. It naturally follows that this process is not always equal, and slight variations in diameter are constantly to be found, as in the case of the bronze medals above quoted, which give a range from 101·6 to 105.

The evidence is therefore valuable, as showing that because a medal is not of the largest size known, it by no means follows that it is not genuine; some of the very finest and best patinated of these "Philiberts" being more than 2 mm. below the *maximum*. Of course, too, exceptional cases may occur, as when an original medal is cut down to be inserted in an extra rim or frame for suspension. Collectors, therefore, who find in M. Armand's work that some of their specimens do not come up to the standard there given, need not assume that they are necessarily false.

What we really need to make measurement a true test, is to have some such comparative table as M. Rondot has prepared in his account of this medal. At present public museums on the Continent have been very slow in supplying proper catalogues of the medals they possess, but now that M. Armand's second edition has made this so easy, it may be hoped that they will not be much longer delayed. If owners of important private collections would also publish their treasures, we should soon have a guide which would be almost infallible, except, of course, in cases of great rarity. It is also most desirable that a common standard of measurement should be universally adopted,

rather than that each country should follow its own, seeing that the study of art as well as its commerce is daily becoming more and more international.

We are told that the price of a good bronze example of the Philibert and Margaret medal in Paris is now about 2,000f., which, considering the great scarcity of fine specimens, is not relatively high; but the augmentation has been somewhat rapid. One result of M. Rondot's work will inevitably be to make its pecuniary value still greater.

There is another interesting point revealed by the archives of Bourg, and that is that Marondo had an assistant in the work "*quem misit quæsitum Lugduni*," and who is mentioned in the contract not by name, but as "*Ejus servitor*," sharing the payment with his master, "*pro illam componendo, pro facturâ ejusdem*." This *servitor* therefore came from an atelier in the neighbouring Lyons, where medals had been made before, and where Marende himself had probably studied his craft. Marende had also a brother at the Bourg Mint (at least he was Master of it in 1516), who may possibly have helped him with the portraits.

In the medal of Charles VIII. and Anne of Brittany (Armand, i. 89, 22) we touch the hand of that prince of medallists, Niccolo Fiorentino, by whom, in conjunction with Louis le Père, his father-in-law, a goldsmith like himself, it was actually executed during his sojourn at Lyons.⁴ This was the first French medal of the kind

⁴ Niccolo died at Lyons in 1499. M. Rondot is able to trace him in the city documents from the year 1485 till his death, but it was not till 1492 that he permanently established himself there.

ever produced, and it was in connection with the same that the word *médaille*, instead of *métaille* or *métalle*, was first used in France. It was struck at the Miut in 1494.

It seems at first sight strange that the fashion of portrait-medals, which had been growing so rapidly in Italy from the time of Pisano, fifty years before, should have taken so long to reach other countries. The simple reason was that there were no artists capable of making them. In Germany, medals by native artists were unknown till after 1500. In England, we had nothing till a much later date. In the case of France, it needed a great master of the art like Niccolo to go and settle in the country before an impulse could be given. By associating himself with a family of Lyonesse goldsmiths, he created the "school of Lyons," which produced, among others, these three pioneers of French portraiture in medals. One he helped to execute himself, and in the other two, dedicated respectively to Anne of Brittany⁵ and Margaret of Austria, while there is much in the composition and ornamentation that stamps them with the individuality of a separate school, it is impossible not to see that the most important parts—the faces—breathe under Italian inspiration.

In conclusion, then, although the imperfect state of the Bourg archives leaves something to be desired in the

⁵ M. Rondot gives the following interesting particulars as to the medallion of Louis XII. and Anne of Brittany. It was modelled by two sculptors, Nicolas le Clerc and Jean de St. Priest; it was cast in the atelier of Jean le Père by himself and his brother Colin—both goldsmiths, and both sons of Louis le Père and brothers-in-law of Niccolo Fiorentino—with the help of a founder whose name is unknown. The medal is dated 1499 (old style); it was made in 1500, and presented to Anne of Brittany on the day of her second entry, March 15th, 1499 (1500).

account, M. Rondot has won thanks and congratulations by his successful researches. How many noble medals still remain to be thus identified as to their authors, and some even as to their subjects! He has thrown a clear obscurity, and he has done much to advance the cause of light on things that but yesterday were wrapped in the difficult study of the medals of the Renaissance, which, though young and backward, is entitled to and will command respect, for it occupies itself with the portraiture of many of the leading personages in history, and with the works of some of the greatest artists that the modern world has produced.

*Parva metu primum, mox sese attollit in auras,
Ingrediturque solo.*

T. WHITCOMBE GREENE.

XXII.

THE OLD NUMERALS, THE COUNTING-RODS AND THE SWAN-PAN IN CHINA.

BY PROF. TERRIEN DE LACOUPERIE.

1. Researches in the literary productions of the Chinese present considerable difficulty in arriving at the precise date of the original invention or introduction of anything; as in many cases, where we consult a native author, we find reference to some still earlier work, and almost on every point we find a statement connecting the matter with the deeds of the sages of antiquity. The high veneration of the Chinese for the works of the ancients has made them more desirous of elucidating these, than of seeking fame in unbeaten tracks; and some of their most important statements have reached their present shape by an almost innumerable series of increments. Their records, as compiled by later writers, are for this reason open to a criticism of peculiar interest. In their ultra-reverence for the sages of their primitive period, who are supposed to have been the models of all virtue, the possessors of all knowledge (lost after them and sometimes found again), the Chinese cannot admit, nor even suppose, that these sages may have been deficient on some point or

another, or may have been ignorant of anything whatever.¹ A protracted effort has been made by the commentators, in order to find supposed allusions, in the early books, to all that has been known afterwards to them, either by some progress of their own, or by acquisition from foreign countries.

2. The result has been that the commentaries gradually come to occupy in their esteem a position almost equal to the original text. Often by the fault of the transcribers under the Han period (about the Christian era), when the ancient texts were rewritten in a style of writing more ideographical than the old one,² the original text being not clear, these commentaries are invaluable, but at the same time they have opened the way to the strengthening of mere suggestions and guesses made according to the wishes and knowledge of the writer, though indifferent to the primitive text. Things to which there are no allusions in the ancient classics or commentaries are not considered worth studying; they are left in the dark, and it is often impossible to find any record concerning them.

3. Besides the difficulties inherent in Chinese literature, we have, sometimes in Europe, to face some *ready-made solutions* which have passed into currency from the unwarranted assertions of some early writers on China unaware of these difficulties, solutions which are still accepted and repeated everywhere. For instance, in regard to the subject of the present note, we read that

¹ *Vid.* on such a view concerning paper-money, my article *Paper-money of the Ninth Century and supposed Leather Coinage of China*, p. 4 (London, 1883, 8vo. reprinted from *The Numismatic Chronicle*, 3rd series, vol. ii.)

² *Vid.* my paper, *The oldest Book of the Chinese*, § 26 (London, 1883, 8vo. reprinted from the *J.R.A.S.* vols. xiv. and xv.)

the Chinese have used the *Swan-pan* from time immemorial,³ and that they ignore the value of position,⁴ two statements which are erroneous and against the weight of evidence gathered in the following pages.

4. In Europe, the Chinese Abacus does not seem to have been known to the learned much before Martini and Spicelius, who gave a description and picture of it in comparison with the European *abacus*.⁵ De La Loubère in the valuable relation of his embassy to Siam has also described the implement.⁶ And in many other works wo

³ Joseph Hager, in 1801, thought that the "*suon-puon* had preceded the use of writing in China. The fact (he says) is, that this instrument represents again nothing more than knotted cords, as may appear by the figure . . . But as the processes of subtraction or of addition would have made it necessary to untie the knots at every instance, or to form new ones, moveable knots, or sliding beads, were contrived, which being put on strings of wire, instead of cords, are to this day employed by the common people in China" . . . Cf. his book, *An explanation of the elementary characters of the Chinese*, p. x (London, 1801, fol.). But this hypothesis is not justified, and we might say is not true so far as regards the Chinese. Among the MS. papers of Father Brotier, from the early Jesuit missionaries in China, the following is not without an interest of some kind for our subject: Confirmatio systematis temporum propheticæ petita ex magicâ constructione et mysticis numeris figuræ æ *Kipan tu*, seu Abaci majarum latruncularum a diluvii tempore usque ad præsentem ætatem in hieroglyphicâ Sinarum traditione servata. In fol. pp. 18. Vid. H. Cordier, *Bibliotheca Sinica*, col. 509.

⁴ I have at hand, for the first statement, P. Perny, *Grammaire de la langue Chinoise*, vol. i. p. 108 (Paris, 1873, 8va.); L. Rodet, *Le Souan-pan et la Banque des Argentiers*, in *Bulletin de la Société Mathématique de France*, vol. viii. 1880, Paris, 8vo.; and for the second, Sir John Davis, *The Chinese*, vol. iii. p. 88 (London, 1844, 32mo.) repeated everywhere.

⁵ Vid. *De re literaria Sinensium*, p. 215 (Lugd. Bat. 1660). P. Martin Martini two years previously had described it as invented about 2600 or 2700 B.C., in his *Sinicae Historiæ Decas prima*, lib. i. published at Munich in 1658, and at Amsterdam in 1659.

⁶ In his second volume, with a figure.

find it properly described and figured,⁷ but we must except John Barrow, in his *Travels in China*,⁸ who has represented it increasing from left to right instead of the contrary, repeating the same error as a writer in the *Philosophical Transactions* 131 years previously.⁹ Properly speaking, the two descriptions of the increase from the right or from the left are inaccurate, as the increase from the right is the true one. In order to avoid any misconception, we shall quote the short description given by E. Bridgman: "The *Swan-pan* consists of an oblong frame of wood, with a bar running lengthwise forming two compartments; through this bar, at right angles, are usually placed seventeen (but sometimes more) small pins, having on each seven balls, five on one side, and two on the other side, of the bar. Any ball in the larger com-

⁷ *Vid.* Sir John Davis, *The Chinese*, vol. iii. p. 66, with figure turned wrong.—Du Halde, *Description de la Chine*, vol. i. p. 276. Staunton, *Embassy to China*, vol. ii. p. 95.—*Le Souan-pano, ou Machine arithmétique des Chinois*, in *De la Chine* by L'Abbé Grosier, liv. x. § 5, Paris, 1819, vol. v. pp. 154–158.—*Comptes Rendus de l'Académie des Sciences*, 16 Juillet, 1860, *Lettre de M. d'Escayrac de Lauture sur le Souan-pan des Chinois*. Purely descriptive.—*The Chinese Abacus*, by J. Goschkowicz (in Russian), Works of the Russian Mission, vol. ii. 1853, or *Ueber das Chinesische Rechenbret*, in *Arbeiten der Kaiserlich Russischen Gesandtschaft zu Peking über China*, Berlin, 1858, 2 vol. 8vo. Transl. C. Abel, *Vid.* vol. i. pp. 293–310. An able descriptive paper.—A. Westphal, *Ueber die Chinesisch-Japanische Rechenmaschine*, fasc. viii. pp. 27–35. *Ueber das Wahrsagen auf der Rechenmaschine*, *ibid.* pp. 48–49. *Ueber die Chinesische Swan-pan*, fasc. ix. pp. 43–53; in *M. d. D. G. f. N. und V. Ostasiens*, vol. i. Yokohama, 1873–1876, 8vo.—*On the Abacus of China and Japan*, by Mr. A. Van Name of Newhaven in *J. Am. Or. Soc.* vol. x. Proc. 19th May, 1875, pp. ex.–cxii.

⁸ 1804, in 4to. p. 296. The description in Wells Williams, *The Middle Kingdom*, t. ii. p. 146, is also faulty.

⁹ Vol. xvi. London, 1688, p. 85.

partment, being placed against the bar, is called unity;¹⁰ and on the left of this they increase, and on the right they decrease,¹¹ by tens, hundreds, etc.; the corresponding balls in the smaller compartment,¹² increase or decrease by fifths, fiftieths, etc."¹³ It is on the whole a convenient instrument.

5. The frame with beads on wire used in this country for school children learning to count has come from the French *boullier*, used for the same purpose, and introduced from Russia and Poland¹⁴ at the beginning of the present century by General Poncelot, who had learnt during his captivity how to use the *tcholu*. The Russians had received it from the Mongol conquerors at the end of the middle age.¹⁵

The *Swan-pan* has been communicated to the various countries which have received the Chinese culture and inventions, but we have no information as to the date of the introduction, except in Japan, where the oldest mention is comparatively modern and dates only from Mori Shigojoshi, a well-known mathematician of the sixteenth century.¹⁶ And a treatise on Mathematics, the *Sampô daizen*, published in 1825, states that the implement was introduced

¹⁰ Any one in the smaller compartment is called 5.

¹¹ As in our system of numeration.

¹² *Chinese Chrestomathy* (Macao, 1841), p. 378.

¹³ The *Swan-pan* is used flat down, the wires perpendicular, and the division nearest to the calculator is the largest with five beads.

¹⁴ *Vid.* M. Chasles, *Développements et détails historiques sur divers points du système de l'Abacus*, § 10, p. 17, n. 1; and also Th. H. Martin, *Recherches nouvelles concernant les origines de notre système de numération écrite* (*Revue Archéologique*, Janvier, 1857), p. 601.

¹⁵ *Cf.* P. Larousse, *Grand Dictionnaire Universel*, vol. i. p. 636.

¹⁶ *Vid.* A. Westphal, *Beitrag zur Geschichte der Mathematik in Japan*, in *Mitt. d. D. G. f. N. u. V. O.* vol. i. fasc. ix. pp. 54-55.

into China about the middle of the fourteenth century, and passed thence into Japan.

6. No Chinese records of the Abacus or *Sican-pan* = Counting-board, exist as far as we knew, in Chinese literature, and its origin is shrouded in mystery. The small collections, the *Poh wuh tche*¹⁷ of the third century, the *Suh poh wuh tche*¹⁸ in ten books of the twelfth century, the *Kwang poh wuh tche*¹⁹ in fifty books, issued in 1607, as well as the great cyclepedias the *Tai ping yü lan*²⁰ in 1000 books, issued in 983, the *San tsai t'u hucy*²¹ in 106 books, issued about 1590, the *Fuen kien ley han*²² in 450 books, issued in 1710, the *Pei Wen yun fu*²³ in 106 books, issued in 1711, and the *Kin ting T'u shu tsih tch'eng*,²¹ the monster cyclepedia, in

¹⁷ 摺物志 by Tchang Hwa, in 10 books.

¹⁸ 續摺物志 by Li Shih; supplement to the preceding.

¹⁹ 廣摺物志 by Tung Sze Tchang; an extension of the first.

²⁰ 太平御覽 by Li Fong and others; made up of quotations from 1690 principal works and many others. An edition of 1807 is in the library of the Royal Asiatic Society. A most valuable work.

²¹ 三才圖會 by Wong K'i. For a rather unfavourable appreciation of this work, *vid.* A. Wylie, *Notes on Chinese Literature*, pp. 149-150.

²² 淵鑑類函 by several authors. A precious work. The index has been published by Prof. Summers in his *Descriptive Catalogue of the Chinese, Japanese and Manchu Books in the Library of the India Office* (London, 1872), pp. 11-12. And there is a notice by Mr. Herbert A. Giles, *A Chinese Encyclopedia*, pp. 753-764, in *Time* (a monthly magazine) for Oct. 1882.

²³ 佩文韻府 Compiled under the special superintendence of the Emperor. The largest collection of compound expressions and quotations of phrases where they occur in literature. A notice of the work, by the late W. F. Mayers, is in *China Review*, April, 1878, vol. vi. pp. 288-290.

²⁴ A valuable description of this wonderful work, now in the British Museum, of which one hundred copies only were printed, has been published by F. W. Mayers, *Bibliography of the Chinese Imperial Collections of Literature*, in *China Review* (Feb.-

10040 books, issued in 1726, do not contain any entry about this ingenious implement. And as each of these large works may be considered as a compeudium of Chinese knowledge, this absence is rather startling. It is only in a late work the *Kih tche king yuen*,²⁵ a cyclopedia of arts and sciences, in 100 books, issued in 1735, that we find a few lines under the title *Swan-pan*. But curiously enough they do not hear on the instrument, and refer only to *swan*, a word meaning "to reckon with counting rods."

7. In the absence of direct records, we have no other line to follow than the negative process. We must try to reach the truth by ascertaining the time when it did exist in China and the time when it was still unknown. And for that purpose we shall consider successively the various data that linguistics and palæography, numismatic notation, mathematical and historical evidence can offer for the elucidation of this interesting problem in the history of the progress of general civilization.²⁶

A.—LINGUISTIC AND PALÆOGRAPHICAL EVIDENCE.

8. The Chinese, who profess for their writing a peculiar reverence, almost like a worship, have been so careful in preserving the old forms of their characters, that when

Apr. 1878), vol. vi.; cf. pp. 218-223. The title is translated: "Compendium of Literature and Illustrations, Ancient and Modern, drawn up under Imperial Authority," in Chinese 欽定古今圖書集成.

²⁵ 格致鐘原 by Teh'in Yuen-lung. It is divided, as justly says Mr. A. Wylie (*Notes on Chinese Literature*, p. 151), into thirty sections; the origin and history of every subject being traced by a long series of quotations from the native literature, ancient and modern.

²⁶ See below, §§ 42-43.

these forms are available, it is almost always possible to obtain valuable information from their study. In case of inventions or introduction of a new thing, a new character was made, or an older one (with a slight modification) was applied to it. Now the *abacus* has no name in Chinese, and if it was an ancient invention of the Sons of Han, we should certainly find a special group or ideogram in the writing describing it. And if the introduction had taken place at an ancient period such as the Han period, or even later, we should again find for its appellation an older character modified, for the purpose, as usual, by the addition of an ideographic determinative. But such is not the case, and the double name or qualificative *swan-pan*²⁷ 算盤 "counting dish or board" shows plainly that it is a comparatively modern acquisition for the Chinese.

9. We have nothing to say of the second word *pan*, which is the common expression (*pan-tze*) for "dish, plate." The first word *swan* is the proper one, meaning "to reckon, to plan"²⁸ (*swan-shu*, *swan-tu*); it is sometimes translated in Sino-European dictionaries (Morrison, W. Williams, Eitel)²⁹ by *abacus* or *swan-pan* by an abuse of extension of meaning; abuse much too frequent, which prevents the proper understanding of the language, and for which the Chinese lexicographers themselves are sometimes responsible; because two words when associated have got a certain meaning, it does not follow that each of them *ipso facto* has gained the meaning when separated.

²⁷ The expression *Swan-pan* itself is more modern than the knowledge of the implement. See below § 41.

²⁸ Cf. *K'ang-hi Tse-tien*: Pu 118+8 str., f. 26.

²⁹ Medhurst, Glemona, Stent have remained faithful to the Chinese definition.

The official dictionary, the *K'ang-hi Tse-tien* (1716), positively states that *swan* means "to calculate with the counting-tallies," and quotes various passages from the three Rituals in support.

This is conclusive against the supposed high antiquity of the *Swan-pan*. Now let us see if something more can be learnt from this line of study.

10. No conclusion about the antiquity of *swan* can be drawn from the three rituals; the *Tcheu-Li*, the *I-Li*, and the *Li-Ki*, as we now have them, are spurious compilations of the Han period; what parts of them are not genuine, we know not. That the greatest part of their contents existed during the last period of the Tcheu dynasty (fourth century B.C.)³⁰ seems pretty sure, but what existed at an earlier period is doubtful. In the case of the *Tcheu-Li*, i.e. "Institutes of Toheu," it is commonly said that the authorship is attributed to the Duke of Tcheu (eleventh century), a man of great ability, who was the first lawgiver of the new dynasty which he had largely contributed to establish; now we have a check against this supposed antiquity in the discrepancies presented by this work with the *Tcheu Kwan*, i.e. "The Officers of Tcheu," a genuine chapter of the *Shu-King*, i.e. "Book of History." The explanation is to be found in countless additions and improvements successively introduced; but the proof that such has been the case detracts a great deal from their authority in matters of precise investigation on special points. As the

³⁰ The supremacy of the Royal or Central Kingdom, ruled by the Tcheu dynasty, over the other states of the Chinese agglomeration, was no longer recognized at that time. The period called that of the Civil Wars extends from 481 B.C. to the foundation of the Empire 255 B.C.

very passages may be interpolations which have crept in from later commentaries, and have got mixed up with the primitive text, their authority, to be trusted, requires confirmation from other quarters.

11. The character 算 *Swan* does not teach us much. It does not seem to be older than the fourth century B.C., when it occurs in the works of Meng-tze (372-289 B.C.) and it seems to be a simplification made at that period of more complicated characters,³¹ because of the apparent picture of "hands disposing something" which it had assumed in the writing, a picture which could not have been fancied in the older forms in the previous style of writing. Hū Shen, the learned author of the *Shwoh Wen* (first century A.D.), who was rewarded only a few years ago by a shrine in the temple of Confucius,³² was unable to find an older form, and gives³³ an etymology, suitable only in the style of writing *Siao-chuen* preconised in his work, which is not supported by the palæographic form of the principal character to which he refers;³⁴ but he indicates another character 筭 of the same sound and meaning, with which it is sometimes interchanged.³⁵ This character 筭

³¹ 算, 算, of which we have Ku-wen forms. *Vid.* Min tai kih, *Luh shu t'ung*, k. vii. f. 2; viii. f. 4. *Cf.* also k. viii. f. 7.

³² In 1875, *vid.* T. Watters, *A Guide to the Tablets in a Temple of Confucius*, pp. 98-100 (Shanghai, 1879, 8vo.)

³³ *Vid.* *Shwoh Wen t'eh pen*, edit. of 986, reprinted in 1598, k. x. f. 39r.

³⁴ The sounds agree in no case. The derivation indicated by Hū Shen is 竹 and 貝; the older form of the latter is not the same as in the characters quoted above n. 29, *cf.* Tung Woi Fn, *Tchuen tze Wei* (1691), s.v., they were composed of 升 and 鼎 or 貝, whereas in the others we recognize 竹, 目, and 升. *Cf.* Min tai kih, l.c.

³⁵ *Cf.* *K'ang-hi Tze-tien*, Pu 118+7; f. 20.

is more interesting for our subject. The description given by Hū Shen himself³⁶ at once attracts the attention, as more definite in its obscurity than anything else we have seen: "Long of six inches, to calculate calendar and numbers."³⁷ This points undoubtedly to the "counting-rods," as no other implement would be suited by these words. The character 算 is apparently of the same period as the preceding; it has no pedigree in the older style of writing, and no other form is known than that given in the *Shwoh Wen* and substantially the same as that in the modern style of writing.

12. Finally there is another character 示 of the same period described by Hū Shen: "to see anything clearly and take an account of it,"³⁸ which has a very curious shape. It is described by the learned lexicographer as composed of two characters 示 "reveal;" this looks more like a graphical than an historical etymology; but as we have no example of an older shape nor of its form in an older style of writing, must we be satisfied with it and consider as of later date the definition of "six-inch measure" found in modern books? It is not unlikely that there is a shade of truth in the last statement. Hū Shen,³⁹ besides the definitions here reproduced of this character and of the first 算, adds in each case: "same as 算." the second character we have described, and

³⁶ *Shwoh Wen tchen pen*, *ibid.* f. 40 v. 算.

³⁷ The description continues as follows: made of 竹 *tuh* reeds and 弄 *lung* to play; sound as 常 (*teh'ang*), 弄 (*lung*) is not pronounced, *ibid.* In Sinitico-Annamite 算, 算 are read: *tsan* and 常 *thuon*; in Mandarin: *suan* and *tschang*. 算 means ideographically "reeds to play with."

³⁸ *Vid.* *Shwoh Wen tchen pen*, k. ix. f. 9v.

³⁹ *Vid.* O.C. at the passages referred to above.

we have seen that this one 筭 indicates "slips of wood as counters to reckon with."⁴⁰ Now the whole matter shows that the Chinese hierogrammatists have combined the ideographic value of a previous character with its apparent picture to frame a new character having the external pictorial appearance suggesting either the six-inch length of the rods, or the separation required to make an account of anything. A quotation given by the *Shwoh Wen* from the *Yü Tchou Shu*:⁴¹ "The Sage separates the people to take an account of them, he adjusts and divides to take an account," seems to show that the last view is the proper one.

13. There is another character 籌 *Tch'eu*, which has some claim to be mentioned here; it means notably "to reckon" and also "tallies, counters." But in the *Shwoh Wen* it is only described as "pitching arrows into a jar,"⁴² a favourite game or sport from very ancient times. By a most natural extension of ideas, the meaning of the character has come to that stated above.

To resume, we learn from paleography that the Swan-pan is a modern introduction into China, and that previously to this convenient implement, the Chinese used "counting-rods," which were known about the fourth century B.C., and do not seem to be much older.

⁴⁰ Cf. Wells Williams, *Syllabic Dictionary of the Chinese Language*, p. 833.

⁴¹ A Record of the Tchou dynasty. *Vid.* on this work, A. Wylie, *Notes on Chinese Literature*, p. 23. If the quotation in the *Shwoh Wen* is from Hsi Shen's pencil, this work cannot have been found in the tomb of the Wei princes, along with the "Bamboo books Annals" in the year A.D. 279, after having remained buried some 575 years, unless Hsi Shen had access to a copy which disappeared after him.

⁴² Or jar-pitching arrows. Cf. *Shwoh wen tchen pen*, k. x. f. 38. Cf. also, *Min tsi kih, Luh shu tung*, k. iv. f. 46.

B.—NUMISMATIC NUMERALS EVIDENCE.

14. The evidence adduced from the coinage is more momentous than any other, as the coins are the most reliable witnesses of history. In the case of the Chinese coinage of the centuries before the Christian era, their evidence will be found of an exceptional interest, as it is the first time, we believe, in scientific research, that their testimony is called for. This might be, if required, our excuse for the brief explanations, that the novelty of the case requires to be introduced here.⁴³

15. Barter in China, as everywhere else, preceded coinage. Gold, silver, copper, silk-cloth, tortoise-shell, precious stones, grains and shells of some kind, were used for that purpose, according to certain regulations afterwards introduced for the measures and equivalents of weight. Various sorts of small implements or tools in bronze, more convenient to pass from hand to hand, were soon preferred to the other materials. Tradition attributes the casting of that kind of objects in ancient times only for the sake of the people impoverished by droughts or

⁴³ The only works of any value on the history of Chinese Coinage in ancient times, the paper by Ed. Biot, *Mémoire sur le Système monétaire des Chinois* in *Journal Asiatique*, III^e ser. vols. iii. and iv. (Paris, 1837, 8vo.); and W. Vissering, *On Chinese Currency, Coin and Paper Money* (Leiden, 1877, 8vo.), are utterly worthless for the coinage previous to the Han period (200 B.C.). They have followed blindly old authority, that of Ma Twan-lin in his *Antiquarian researches* (*Wen hien tung k'ao*), an immense work, wonderful in the variety of its subjects, but which has been much too highly praised by Rémusat, who had not in his time the possibility of verifying its accuracy. We must take a more sober view, and admit that this Chinese author was utterly deficient in criticism. What Dr. Bretschneider says of his Geography, we can repeat of his numismatic notions, that they are full of blunders and confusion.

otherwise. Small spades, adzes and knives,⁴⁴ improper for the work for which their shape was intended, and later on, flat rings, were multiplied and entered into currency. Trustworthy statements are scanty for the reasons expressed above (§§ 1, 2). Strict regulations for this barter were issued after the establishment of the Tchen dynasty (eleventh century B.C.). At the beginning of the sixth century, *Tchwang*, King of Tsu (one of the states of the Chiaeso confederation), attempted, without success, to make all this differently sized hullioa exchangeable, indiscriminately, regardless of its weight.⁴⁵

16. In 523 B.C. the King *King* of Tchou (the Middle-Kingdom) issued, but without success, the hullion (then coinago), in various sizes and weights regularly proportioned. But the habit of weighing, still in use in the present day for precious metals, was already too strong to be overcome. A fiduciary coinago has never been willingly accepted in China, and the coins, whatever mark they bore, were never taken for more than their intrinsic value without great objection. The above described hullion does not appear to have been turned into a coinago by a regular stamp, before the time of the last-named *King*, and the traditions pointing to an earlier date are obviously spurious improvements on ancient texts which do not bear such a construction.

⁴⁴ Knives were not long ago, and are perhaps still, in use as a currency on the S.W. borders of China. According to R. Wilcox, *Survey of Assam and the neighbouring countries executed in 1825-6-7-8* (Asiatic Researches, vol. xvii.), "the Khamti and Sing-Pho were supplied by the Kha-Nung with salt and thin iron dhas, the latter forming the currency of the district." The name of *dha*, a small square knife, is obviously connected with the Chinese *tao*, the name of the knife-mooney.

⁴⁵ It was the first attempt in China of a fiduciary mooney.

Coins were not largely multiplied before the last hundred years of the Contending States period (481-255 B.C.) during the desperate struggle of the various Principalities against the encroachments of the rising State of Ts'in, of which the Ruler, having nearly subdued under his sway the whole country, established the Chinese Empire.

17. Their legends are generally very scanty; the name of a city, or more cities associated for the issue, and besides that, sometimes together or isolated, the intended weight value, and a serial number (of the issues or quantities?) are the only information to be found on the coins of that period. The serial number is, of course, the only one of real interest for the subject of the present paper.

Graphically, excepting the earliest, the figures are very loose. In fact they offer the same carelessness as the other characters of the legends. This is the result of the freedom of issuing coins almost impossible to repress when the limit is the intrinsic value more or less visible, and which has made China the home of counterfeiters. The accompanying table exhibits the figures⁴⁶ and their variants, according to the legends of the coins, spades, weathers, and knives of the fourth and third centuries B.C.

⁴⁶ These figures and numbers, which have never before been compiled, even by the Chinese, have been collected by me while preparing the Catalogue of Chinese Coins in the British Museum. They are entirely new material offered to the investigator of mathematical history. They are found on coins issued by the towns of Ping-yang, Wen-yang, Ta-yn, Ping Tchou, Ping tcheu, Ki-shi, Shang-ching, Tze-ta, Ming, etc. Cf. Li Tsin Li, *Ku Tsuen hwei*, *yen*, kk. v. vi. vii. viii.; *Su Tsuen hwei*, *pei*, ii.; and also *Ho Pu Wen tze kao*, k. ii.; *Ku kin so kien tsh*, kk. i. ii.

18. NUMERALS FROM THE CHINESE COINS OF THE FOURTH AND THIRD CENT. B.C.

[illegible]

19. A necessary remark is that the form \perp for 6, which seems to be a simplification of the more complicated forms for this figure, is most likely the ancestor of $\perp \equiv \perp \equiv \perp$ which occur on later coins of the third century B.C.,⁴⁷ whereas \perp occurs, on earlier coins which are marked *seriatim*, with other forms for 7, 8, 9. These new shapes for 6, 7, 8 and 9, which recall the principle of the *swan-pan* where the upper bead is worth *five*, were apparently connected with the counting-rods. *Wang Mang*, the usurper, who ruled over China A.D. 9-23, between the two Han dynasties, and to whom all sorts of wild reforms are attributed, caused the revival of a notation older than his time, and in which 6, 7, 8 were indicated by \top , Π , III . This is again in evident connexion with the counting-rods, and it is worth noticing that these figures composed of straight lines do not appear on the earlier coins of the fifth century, where the ordinary shape (the first of the above list) alone occurs.



20. Hitherto we have dealt only with the single figures; we have now to consider the numbers with two figures as they exhibit the most curious revelations. The collection of examples displayed in the above table shows that they are not exceptional, and that they are genuine specimens of the current system of notation. They are not open to the doubts which may arise from the possibility of having been subjected to emendations, additions or improvements through successive commentators and copyists; they are copied without falsification from coins of the period indicated above, and consequently it follows that we have nothing

⁴⁷ Specially on the coins issued by the small state of *Ki*, which protracted the struggle against *Ts'in* during the greater part of the third century B.C.

to do but to register what they show, *i.e.* the knowledge of the value of position, and a great step towards the use of the zero. This is as curious as unexpected, inasmuch as this progress, which is proved to have been accompanied by such great difficulties in the West, is here the natural outcome and self-improvement of the ordinary and older systems of writing the numbers in full, by dropping the appellatives of values for the mere sake of that brevity always sought for in Chinese.⁴⁸ We can see plainly how the process has been going on; for instance in X 55, the *tens* are still written, though reduced to a single stroke instead of 十 as in $14 = \text{十}$. Too much stress as to the actual date of the beginning of the process of shortening, and then dropping, the appellative of quantities, ought not to be put on that instance, as very likely it is older; the ancient process would have been revived in that special case because the two figures for 5 being superposed could have been mistaken for a character of the writing X *hiao* "communicate." Now other instances are to be preferred, such as ㄅ , ㄆ , where the circle (the zero?) or triangle, an abridged form of 十 , exhibit undoubtedly the process of transition. These last instances are of the fourth, and the preceding is of the third century B.C. It is quite clear that the knowledge of the value of position existed at that later period.

21. As to the question of its existence in earlier centuries, we find a very curious instance of the growing process. It is in the invaluable chronicle of Tso Kiu Ming, the *Tso Tschuen*, which almost always accompanies the *Tschun Tschu* of Confucius, that we find it. It was

⁴⁸ From a coin of *Ki*. Vid. *Kiu Tschuen hwei*, *yuen*, k. vii. f. 3.

in the thirtieth year of the reign of Duke Siang, of the State of Lu (542 n.c.), about an old man of 73, who did not know how to compute his years, and in answer to a question says that since his birth, which happened at a first moon the first day of the cycle (of 60 days), 445 cycles and $\frac{1}{2}$ of days (or 26660 days) have elapsed. The Music master present having said that consequently the age of the old man was 73 years, the historiographer went on saying: "The character  *hai*⁴⁹ is composed of *two* at the head and *sixes* in the body of it. If you take the *two* and place it alongside the *sixes* of the body () you get the number of the man's days."⁵⁰ Another officer said: "Then they are 26660." The last number in the text is written in full: "2 myriads 6 thousands 6 hundreds and 6 tens" in column as the current text. But in the character *hai* the three 6 are placed horizontally one next to the other, but the text does not say if the *two*⁵¹ is to be placed on the left (as with the swan-pan, the counting-rods, the commercial figures of the present day) or on the right (as would be the horizontal writing of any sum in full with the ordinary characters). But inasmuch as we know from the coin-instances, that it ought to be placed on the right, this uncertainty is immaterial to the value of

⁴⁹ Now 亥 the 12th of the cycle of 12.

⁵⁰ *Vid. Chinese Classics*, ed. Legge, vol. v. pp. 552 and 556. The translator has given in brackets the disposition with the || on the left, but without stating his reasons. But the numbers exhibited by the coinage (cf. 20c, 25b, 26b, 27a, 52b, of the table above) show that the *two* is to be placed on the right.

⁵¹ Also called the weight-character and written 碼字 or 馬子 or 碼字 and also 馬式 which is the earliest and appears at the end of the sixteenth century.

position of the three sixes, one for the tens, the next for the hundreds, the next for the thousands and the following 2 for the tens of thousands. This looks more like a puzzle than anything else, and as if the dropping of the appellative of quantities was a more supposition of the said music master. Unless supported by contemporaneous evidence, we must not see there a proof of a current knowledge of the value by position, but certainly it was a hint, which not long afterwards suggested the possibility of dropping the appellatives and letting the figures stand by themselves. We have seen how usual was the process on the coinage of the fourth and third centuries B.C.

22. Considering again these numbers from the coins, we see that the figures could be written vertically as the ordinary Chinese characters, or horizontally from right to left, the increase by tens going from left to right, contrary to our numerical notation.⁵² This was also contrary to the modern Chinese cursive notation, contrary to the order in which were used later on the counting-rods, contrary to the order followed in calculating with the swan-pan, and consequently it offers but a negative proof as to the existence of the counting-board at that time.

23. The last use on coins of these numerals made of straight lines occurs in the sixth century, on the *Wu chu* = 5 *chu* coins of the Liang dynasty (A.D. 502-557),⁵³ with

⁵² An ancient Chinese work, the 數術記遺 *Shu-shuh-ki-y*, might have helped our investigations. It was written by 徐岳 *Siu Yoh* of the Han dynasty, and in a rather obscure style; it gives details of the Buddhist numeration, and particularizes fourteen professedly ancient systems of calculation. But it has disappeared after the Tang dynasty, and the work now existing under that title is supposed to be a spurious fabrication. *Vid.* A. Wylie, *Notes on Chinese Literature*, p. 92.

⁵³ *Cf.* *Ku tsuan hwei*, Li, k. vii.

the series nearly complete but with some slight alterations as follows:—

I II III IIII X 一 二 三 四 五 六 七 八 九 十

where the 9 only is missing. And excepting 三 for 23, which is scarcely satisfactory, we have no means of verifying if the value of position was still in practical and daily use.

24. A long while before the disappearance of the ancient (tally) numerals from the coinage, we meet the ordinary characters used to write the numbers. They occur in isolated cases not in series, from the time of the Han dynasty downwards; and on the coins of the Sung dynasty (420-477 A.D.) they are nearly like their modern shape.⁵⁴ They are found first according to the *Siao tchuen* style of writing, or small seal characters, as follows:—

一 二 三 四 五 六 七 八 九 十 (Siao tchuen)⁵⁵

一 二 三 四 五 六 七 八 九 十 (modern form)

But these numerals have nothing to do with a knowledge or ignorance of the value of position; they are phonetic expressions used to write the numbers; the appellation of

⁵⁴ Cf. *Ku tsuen hwei*, Li, k. vi. ff. 5, 6.

⁵⁵ Through their oldest shapes (*Ku-wen*) I have traced up the pedigree of these characters to their phonetic origin as intended compounds or as adopted words of the language. The sign for FOUR in its oldest shape is most likely an alteration of a character now written 理 *lee* "regulation of affairs." For FIVE it was adopted from 父 *ngai* "grass cut." For SIX it was the primitive character for "mushroom," now fixed into 采 *lok* by the addition of the determinative 艹 "a sprout." For SEVEN, it was a phonetic compound of 十 and 乙 = *Snip* + *at* or *shat*. For EIGHT it was the word 八 *pat* "separate." For NINE it was an alteration of 久 *ku* "ancient." With the exception of the specially made compound character for "seven" all are nothing else than the adaptation of mere homophones.

classes, tens, hundreds, thousands, etc., have to be written after their corresponding number. For instance 1883 is written: ONE *thousand* EIGHT *hundred* EIGHT *tens* THREE. The order is from top to bottom in columns, or from right to left in horizontal lines, as the ordinary writing. They have no connection whatever with the system of the *swan-pan* nor with that of the mathematicians of the middle ages.⁵⁶

25. Coins of a much later period (thirteenth century) exhibit for 1, 2 numerals called *Tasiēti shumuh tze*⁵⁷ or

⁵⁶ The *Note on the Chinese and Indo-Arabic numeral symbols* by J. R. Logan (App. C to ch. vi. of his *Ethnology of the Indo-Pacific Islands, Language, Part II*. Singapore, 1855, 8vo.), is now antiquated; the learned author in his endeavour to trace a Chinese ancestorship for the European numerals was not aware of the extensive ground covered by this problem, and the solution he proposes is entirely at variance with the facts.—Since this paper was in the hands of the printers, Mr. G. Kleinwachter, unaware of the unsuccessful attempt of Logan, has also ventured the derivation of the European numerals from the Chinese figures. Cf. his articles in the *China Review*, May–June 1883, *The Origin of the Arabic Numerals*, pp. 379–381; July–August, 1883, *More on the Origin of the Arabic numerals and the Introduction of the Sino-Arabic numerals in Europe*, pp. 25–30. Without entering into the many errors of detail in these papers, the transformations of shape proposed by the author are so violent as to allow the derivation by the same process of any character whatever from any other character; if the supposition of so many alterations was admitted without the slightest documentary evidence, there would be an end of scientific method in palæographic matters. But his system is open *ab initio* to a still more sweeping objection, viz. that there is no room for it. The historical and graphical derivation of the European numerals, through Kابل and Persia, from one Indian notation by alphabetical characters, is proved in the whole, and secondary points only remain to be settled. Sir E. Clive Bayley in the *J.R.A.S.* vol. xiv. and xv. *On the Genealogy of Modern Numerals*, parts i. and ii., is the last writer on the subject, and he has done a great deal towards the definitive solution.

⁵⁷ 大篇的數目字. Cf. Philo. Sinensis (E. Gützlaff), *Notices on Chinese Grammar* (Batavia, 1842, 8vo.), p. 66.

"numerals in capital writing," which consist of a selection of characters similar in sound, but of various meanings, used in official and important documents, to prevent their alteration,⁵⁸ or for the sake of ornament and the display of learning. The series runs as follows:—

壹 貳 參 肆 伍 陸 柒 捌 玖 拾.
參 肆 久

The first five of these numerals with the variants here indicated instead of the upper figures which are now current and are the complete forms, occur in books of the sixteenth century; but nothing is known exactly as to the time or when they were finally systematized.

26. The *K'ang-hi Tze-tien*⁵⁹ does not give any information on these figures, but under the entry of *Pah* 捌 "Eight," where it says that it is the fictitious character for *eight* in the official documents. The *Tching tze tung*⁶⁰ says that in the laws of Ts'in,⁶¹ for the isolated characters of numerals, they took flourished and elegant characters and changed — "one" into 壹; 二 "two" into 貳. On this the editors of the *K'ang-hi Tze-tien* remark, "the inscriptions of Ts'in make 一, 二, 三 and from 4 use the ordinary characters, and as *Siu she*⁶² is the first who did employ 捌 for 'eight,' it follows that the actual series from 1 to 10 is not made of the ancient characters of Ts'in."

⁵⁸ As being less liable to alteration of any kind, they are used on drafts, pawn-tickets, etc. Cf. Herbert A. Giles, *A Glossary of Reference* (Hongkong, 1878, 8vo.), p. 179.

⁵⁹ Cf. Pu 64+7, f. 53.

⁶⁰ An important dictionary published at Nanking in 1634.

⁶¹ The short-lived dynasty of the founder of the Chinese Empire, 255-208 B.C.

⁶² 徐氏, who lived under the Posterior Tang dynasty, tenth century.

This is true as far as it goes, for if we look at the inscriptions of the Ts'in period, of which the fac-simile is reproduced in the epigraphical collection *Ts'ih-Ku-tsi Tchung-ting i-ki kwan-tsi*,⁶³ we find only a series represented by the following numbers: $- = 1$; $\equiv = 3$; $/ \backslash = 8$; $\times = 26$; $\text{𠄎} = 24$, etc.

27. Now, if we look at more ancient texts, we are bound to recognize that the habit of writing complicated characters of the same sound instead of the ordinary numerals had begun earlier, but not as a regular series. The examples we find are much more ancient than the time of the Ts'in, and have been handed down by the native palæographers from the oldest MSS. recovered after the Burning of the Books (213 B.C.),⁶⁴ and from the ancient inscriptions. Besides the ordinary numerical characters, we find, as might be expected from analogy with the fate of the other characters or words of the writing, three kinds of substitutes: combined phonetics transcribing the spoken sound, homophones, and ornamented characters.⁶⁵ As they do not occur on coins, it will be sufficient, for our present purpose of showing the origin of this system, to transcribe the examples in (*Kiai-shu*) strokes of the modern style of writing: 1, 2, 3, are often written 弌, 弌, 弌; for 6 we find 𠄎; for seven 𠄎,

⁶³ *Vid.* 積古齋鐘鼎彝器款識, k. ix.

⁶⁴ And reproduced in the excellent palæographical dictionary *Luh shu t'ung* by Min tsi kih (1661), k. ix. ff. 15, 16. Of course the same forms are given in other dictionaries, as the *Luh shu fen luy*, by Fu Lwan Tsiang, and the *Tchuen Tze-Wei* by Tung Wei-fu (1691), in which the characters being classified according to the 214 *pu*, do not require reference of book and page.

⁶⁵ On this principle of archaic orthography and the symbolico-syllabic use of the characters in compound, *vid.* my paper *On the history of the Archaic Chinese writing and texts*, p. 4 (London, 1882), *The oldest book of the Chinese*, § 23, 2, 3 (London, 1883).

which is an homonym; for 2 = *nit*, we find the phonetic transcriptions 若九 = *nok-ruk* and 二 = *ni-tao*, or *N-T*, the latter being also an homonym with a distinct meaning; and also for 6 = *luk* we find the phonetic transcription 若干 = *nok-kan* or *NK* (*n*=1) for *L-K*.⁶⁶ The symbolico-syllabic characters in compounds had the value for their initials.

They do not present in any way the slightest connection with the system of the swan-pan.

C.—MATHEMATICAL EVIDENCE.

28. It is most important to remark that the value of position increasing from right to left (as on the *Swan-pan*), about which so many things have been said, was known at least six centuries ago by the Chinese. In his valuable paper on Chinese Arithmetic,⁶⁷ a great scholar, speaking of a native work on mathematics written at the close of the twelfth century, says: "It is not a little remarkable, that while it has been gravely asserted by most respectable authorities in Europe, that the Chinese are ignorant of the meaning of local value, we find here on the contrary, that they have pushed the principle to a degree of refinement unpractised in the West. It may be noticed, too, that instead of the old form of writing the equation, used in Europe, $x^3 + 15x^2 + 66x = 360$ —the method invented by Hariot, of placing all the significant terms on one side,—is precisely that used by the

⁶⁶ Cf. *Min tai kih*, *Luh shu t'ung*, kk. ix. f. 18; vii. f. 6v.; iv. f. 61v.; vii. f. 7; v. f. 29; ix. f. 6; ix. f. 15; ix. f. 29; vi. f. 31; x. f. 25v.

⁶⁷ *The science of the Chinese. Arithmetic.* By O — (A. Wyllie). Extracted from the *North China Herald*, 1852, in *The Chinese and Japanese Repository*, 1864, vol. i. pp. 411-417, 448-457, 494-500; vol. ii. pp. 69-73.

Chinese some five centuries earlier;⁶⁸ and though this is in itself but a variation in algebraical language, yet it is said by De Morgan to have been the foundation of most important branches in the science. In (Tsin Kiu Shao's *Su shu kiu tchang*, A.D. 1247) Tsin's original work, positive and negative numbers are distinguished by the former being in red ink, and the latter in black; and this custom seems to have been in use long before his time; for we find Liu Hwei⁶⁹ referring to it in the middle of the third century. It is said to represent the bamboo tally numerals, used in ancient times."⁷⁰

29. In the said work of Tsin Kiu-Shao, the numeral expressions are all written horizontally, and it is from his time that the process seems to have been introduced. And as the same work contains obvious evidence of a direct or indirect North Indian influence,⁷¹ it may be asked, if this influence is not to be recognized in the notation.⁷²

⁶⁸ Here is the equation :

1	1 Cube of Monad.
1≡	15 Square of Monad.
上元	66 Monad.
三TQ太	360 Natural number.

⁶⁹ About 263 A.D.

⁷⁰ I have quoted word for word, excepting the dates, etc., which I have borrowed from another and later work of the same author; cf. *Notes on Chinese Literature*, pp. 91, 93.

⁷¹ It is in this work that is given for the first time a new formula for the resolution of indeterminate problems, called *Ta yen* 大衍, being analogous to the better known Hindoo process *Cuttaca* which Colebrooke translates "Pulverizer." Cf. Wylie, *O.C.* p. 93.


⁷² It is in the eighth century that the Hindus were in possession of the value by position and the use of the zero. And it is not unlikely, that the advantage of the abridgment, which as a fact produces the value of position but which the Chinese have not carried to a regular system in practice, had been perceived

which is one of the Ma-tze or cursive numerals of the present time in China, and the main reason why some persons have sought for a Bactrian origin for this modern set of Chinese numerals, a question which we shall consider hereafter.⁷⁶

30. The notation exemplified from the native works of mathematicians of the thirteenth century was totally different from the ancient numismatic numerals, not so much in the shapes of the figures, which excepting $\times =$ are all variations of the old forms, than in direction; it increases from right to left and has to be read from left to right as our numerals.⁷⁷ This is a change of primary

⁷⁶ "It may not be generally known that these signs are not Chinese, but Bactrian or Phœnician," *Notes and Queries on China and Japan*, vol. iv. p. 6 (Hong Kong, 1870, 8vo.). See also Herbert A. Giles, *A Glossary of Reference*, p. 179, who wrongly maintains this statement against, which Dr. Bushell had already protested in the same *N. and Q.* vol. iv. n. 103, p. 102. Cf. our remarks below, § 32.

⁷⁷ It may prove interesting to read the following account which I translate from the *Grammaire Coréenne* (p. 44) published by the French Missionaries at Yokohama in 1881, about the Korean "Counting Rods" (가 지 산 *Ka-tji san* 枝算). "The Koreans to make their calculations use small rods in non-fixed number, which are placed from right to left, isolated or in groups, in order to represent the units, tens, hundreds, etc. Disposed vertically they indicate each a unit of the order of the units or of the tens, etc.; disposed horizontally, they are worth five units of the same order. Ex.:

   	= 83,961	   	= 2,248
8 3 9 6 1		2 2 4 8	

Instead of rods, they use also small stones, but more often *sapèques* (or coins) and, according to the same rules. For instance:

    	
1 2 9	

Another system of numeration is indicated by the popular saying: 천 청 백 립 *Tchyen-hsing Pâik-rip*, etc., i.e. thousand hori-

importance, against the old tradition, and which cannot with any probability have been initiated in China.

31. The cursive numerals now in current use resemble the tally numerals of the middle ages not only in shape, which is nothing else than their cursive alterations with the addition of a new compound for *nine* and a cursive form of the regular numeral for five, but also in order; the numerals increase from right to left and have to be read as in our notation from left to right, in the same way as in the works of the mathematicians we have quoted. The main difference consists in this that the value of position is not implied as understood, and the names of the classes have to be written underneath. For instance 6544 has to be written ⁶thousands ⁵hundreds ⁴tens ⁴. This is an ample evidence that the value of position in mathematical works is confined to the learned and does not in reality exist in the Chinese mind; the suppression of the written indications of classes is but a temporary dropping for the sake of brevity, a process of constant practice for everything in speech and writing among the sons of Han.

The series runs as follows:—


1	II	III	×	5	1	±	≡	久	+ ⁷⁸
or								久	十

zontal, hundred upright; ten horizontal, units upright." Whence the formula:

$$\begin{array}{c} \equiv |||| = |||| \\ 3 \quad 4 \quad 2 \quad 5 = 3,425 \end{array}$$

But the first system, as widely known as this one, is nearer the abacus which the Korean traders use as the Chinese."

⁷⁸ We find them so shaped in the pagination of native works and also in the *Swan fah t'ung tsung* of 1593, k. 1 f. 3. E. C. Bridgman (*Chinese Chrestomathy*, Macao, 1841, 4to.) gives a still more cursive shape than those of our text; the only difference is in 十 for 10 instead of 十.

32. It is quite clear from a close examination of these shapes, that we do not want to look outside China for their explanation and origin. It looks as if they were a partial revival of the most ancient figures, combined with a cursive alteration and combination of the regular ones. The forms for 1, 2, 3, do not require any remark. That for 4 is an abridged form of , the old combination for this numeral; the upper horizontal stroke is ornamental, then remain four strokes which most likely have been simplified into two crossing each other, as in the process of simplification the four rays of such a cross may have been considered as sufficiently suggestive of the required number. That cross-shape for 4,⁷⁹ as we have seen, occurs since the 13th century, it does not seem that we have to suppose for it a Bactrian or a Phœnician origin for several reasons. First, the Phœnicians had long disappeared and had never known this shape. Second, the Bactrians, like the Phœnicians, had also ceased to exist long before the adoption by the Chinese mathematicians of this disputed numeral. Therefore we must consider it as a mere coincidence and worthless similarity. On the other hand, we find it with a totally new direction of notation, in which we might see an Indian influence, but India had not this shape and cannot have given it.⁸⁰

The form of 5 is obviously the cursive of 五.

⁷⁹ Tai Tung, the author of the *Luh shu ku*, who lived in the thirteenth century, describes the X, the old sign for five, and does not allude to the use of the same symbol for 4 in his time. See the passage in L. C. Hopkins, *The six Scripts*, a translation (of the introduction of the *Luh shu ku*, Amoy, 1881, 8vo.), p. 15, n.

⁸⁰ Cf. the comparative table I., given by Sir E. Clive Bayley, *On the Genealogy of Modern Numerals*, Part i. in *J.R.A.S.* vol. xiv. (1882).

For 6, 7, and 8 we have the familiar combinations of straight lines, met with on early coins and in the mathematical works of the middle ages.

The form for 9 is a composite made of the preceding shapes of 5 and 4 superposed, and as to 10 it is the ordinary cross which does not vary.⁸¹

33. Very little information is available on these cursive numerals. Their name *Su-tcheu Ma shumuh tze*, or "Ma numerals of Su-tcheu,"⁸² indicates perhaps the place where they were invented. As Su-tcheu, the great and rich manufacturing town of Kiang-su province, received its name under the Ming dynasty,⁸³ and as we find these cursive numerals quoted in the *Sican fa tung tsung* of 1593, it seems that we have in this concurrence *prima facie* evidence of the sixteenth century being the time of their invention.⁸⁴ On the other hand, they have various other names, but they are of no help in the solution of the question.

⁸¹ They are abbreviated forms used to facilitate the writing and expedite the drawing of accounts.

⁸² 蘇州碼數目字 *cf.* Philo-sinensis, *O.C.* p. 67, who indicates also another name 花碼的數字 *Hwa-ma-ti Shu-tze*.

⁸³ It bore the same name under the Sui dynasty (sixth century), but was called otherwise under the subsequent dynasties. *Cf.* G. M. H. Playfair, *The Cities and Towns of China* (Hong Kong, 1879, 8vo.), n. 6666.

⁸⁴ In the name *Hwa-Ma-ti Shu-tze*, *Ma* means "weight," and it seems to me that *hwa* is here a word of disparagement showing that they are of a lower standard than the plain numerals; *hwa* should be taken here with its meaning of "indistinct vision." This view is justified by another name *Ngan-ma* 暗馬 instead of *hwa-ma*, in Wylie's "Compendium of Mathematics" (in Chinese 數學啟蒙 *Shu hieh k'i mung*, Shanghai, 1853); *ngan* means "obscure, secret," and corresponds to *hwa*; though *ma* is there deprived of the ideographic determinative (石 "stone") which precisifies its sound in the sense of "weight," we have no doubt that *hwa-ma* and *ngan-ma* have the same meaning in the com-

D.—HISTORICAL EVIDENCE.

34. The historical traditions concerning the counting-rods and the *swan-pan*, though very few, are not without interest.

We can dismiss without difficulty the statement according to which the *swan-pan* was invented by Li Sheu, the chief mathematician of the mythic emperor Nai Hwang-ti

pound name. We do not see any sufficient reason to suppose with Bazin (*Grammaire Mandarino*, p. 31) that *ngan-ma* is the name of an unknown foreign country. In the most ancient work where we find them, they bear that name of *ngan-ma* (cf. *Swan-fah t'ung tsung* (1593) k. i. f. 3v.) and also *ngan-tze ma-shu* 暗子馬數, which most likely, as the above-quoted names, means nothing else than abridged numerals for weights. We find also the Ma-tze, called 碼字, 馬字, 瑪字 and also 馬式. A non impossible supposition to explain the variations of *ma*, should be that this would be the name of a mathematician who made these abbreviations, or at least who improved them and gave them the regularity and convenience they present for quick calculation. And it is not unlikely that an European influence should have acted there. The *Swan-fah ting tsung* was published in 1593, or eleven years after the arrival of Matteo Ricci, in Chinese 利瑪竇 Li Ma-teu, who devoted his first efforts to the subject of mathematics, and translated a treatise on European arithmetic as a preliminary step. He also translated Euclid. It will be remarked that the first character of his surname, Ma-teu, is also used for the Ma-tze numerals. The author of the article *Arithmetic* in the *Encyclopædia Britannica* (eighth edit.) has not overlooked a European influence when he writes the following interesting passage: "About the close of the seventeenth century the Jesuit missionaries Bouvet, Gerhillon, and others, then residing at the court at Peking, and able mathematicians, appear to have still further improved the numeral symbols of the Chinese traders, and reduced the whole system to a degree of simplicity and elegance of form scarcely inferior to that of our modern ciphers. With these abbreviated characters they printed at the Imperial Press, Vlacq's 'Table of Logarithms,' extending to ten places of decimals, in a beautiful volume, of which a copy was presented by Father Gaubil, on his return to Europe, about the year 1750, to the Royal Society of London."

(Nakhunta). This tradition, which we find still repeated in recent European books of sinology,⁸⁵ has been developed out of another one which has not any better foundation,⁸⁶ and according to which the said Emperor Hwang-ti commissioned Li Sheu to invent mathematics and to lay down the principles of calculation.⁸⁷ The mythological growth of the legend is here apparent, the translation of the name of *Li sheu* "chief mathematician" speaks for itself, and the "swan-pan" business has made its appearance through the single word 算 *swan* "to reckon," used in the text of the record,⁸⁸ according to the process we have mentioned above (§ 2).

35. The invention of the "Nine sections of arithmetic"

⁸⁵ *Vid.* for instance P. Perny, *Grammaire Chinoise*, vol. i. p. 108.

⁸⁶ Tch'ing Ta-wei in his work *Swan sah tung tsung*, published in A.D. 1593, states very clearly that the ancients did not know the Swan-pan. *Vid. kiuen* xii. f. 9r.

⁸⁷ In the great historical compilation, called *T'ung kien kang muh* under the direction of the celebrated Tchu Hi (A.D. 1130-1200), and which is considered as the standard History of China (*cf.* Mayers' *Chinese Reader's Manual*, i. n. 79), it is stated, under the reign of Hwang-ti, that he caused his minister, Li-shou, to form the *Kiu-tchang* "Nine sections of Arithmetic." These nine sections, which have formed the nucleus of arithmetical science in China, contain several things which deserve attention. Divided into 20 phrases by the great sinologist A. Wylie, they exhibit allusions to the quadrature of the circle and to plane mensuration; one gives the ratio of the hypothenuse to the short sides of a right-angled triangle; others state that a quadrangle bounding the three angles contains double the area of the said triangle, and that the whole is equal to the sum of the several parts; one is the well-known 47th proposition of the first book of Euclid; the application of trigonometry to the measurement of distant objects, and the fundamental principle upon which the area of the circle is calculated, were also known to the author, as well as some ancient instrument for representing the appearance of the heavens and earth.

⁸⁸ *Vid.* *Liu Fung suo she*, in *Kih toh king yuen* 格致鏡原, k. 49, f. 7. A Cyclopædia compiled in 1735.

is attributed to Teheu Kung,⁸⁹ and he is reputed to have also invented the beginnings of the Swan-pan.⁹⁰ This statement, which is to be considered as an ingenious device of a recent writer to combine the reputed authorship of the ancient sage with the more sober notions of later times, has no other support, than the part played by Teheu kung in the exposition of the said "nine sections," and we hear no more of the Swan-pan.

It is of the counting-rods that we hear in history. The oldest references refer to the fourth century B.C., and it seems by the rather contemptuous manner with which they are mentioned, that they were considered as a new invention or improvement for the facility of calculation by the unlearned. This is important because it agrees with the indications derived from palæography and numismatics, which tend to show that the counting-rod do not seem to be older than the fourth century B.C. With this new information from a different quarter, the question may be considered as pretty well settled.

36. Hiao-tze, the ruler of Ts'in from 361 to 337 B.C., who had proclaimed⁹¹ offers of high reward to men of ability from other States, considered⁹² that good mathematicians ought not to use counting stalks (籌策). It will be remarked that the written expressions 算, 筭, do not seem to have existed at the time.

Tehwang tze (born about 330 B.C.), the author of such childish and useless speculations,⁹³ is reputed not to have

⁸⁹ On this great man, see above § 10.

⁹⁰ 算盤之始. *Vid. Liu Ping tze she*, *ibid.*

⁹¹ *Cf. Mayers, Chinese R.M.*, i. n. 845.

⁹² *Cf. Tui Ping yü lan*, k. 750, f. 3v.

⁹³ The work which goes by his name, though many parts are not his (*cf. Wylie, Notes on Chinese Literature*, p. 174), the *Nan*

used the counting-rods.⁹¹ This second tradition about the counting-rods does not come from the same work, nor the same class of information as the preceding. We have not to connect the second with the first, and we have only to consider it as a negative indication, which might prove that the practical knowledge of the implements had not yet reached the region of Liang, the native country of the philosopher.

37. The next tradition in chronological order that we meet with contains some material information on these famous rods. Tchao T'o (B.C. 240-137),⁹⁵ formerly officer of the first Emperor Shu Hwang-ti, and who ruled over Kwang-tung and Kwang-si as an independent sovereign, had several sorts of counting-rods made to suit his fancy, when he went to the South. This would be about 215 B.C. The Emperor Ngau (397-419 A.D.) of the Eastern Tsin dynasty kept them precious in his Museum of Antiquities.⁹⁶ They were one cubit long, some were white, made of bone, others were black, made of horn. Under the reign of Wu-Ti (140-86 B.C.) of the Han dynasty, Sang Hung was renowned about 118 B.C. for his ability in using the counting-rods for his calendaric calculations.⁹⁷

38. In the annals of the Western Tsin dynasty (A.D. 265-317), it is recorded that Wang Jung, a minister of Hwei-Ti who ruled A.D. 290-307, when he had taken in

hwa tchen king, has been rewritten lately in English by Mr. F. H. Balfour, *The Divine Classic of Nan hwa*, Shanghai, 1881, 8vo.

⁹⁴ *Vid.* *Yuen kien Lei han*, k. 331, f. 12v.

⁹⁵ On Tchao T'o Prince of Yüeh, *vid.* a short biographical notice in Mayers' *Chinese R.M.*, i. n. 50.

⁹⁶ *Cf.* *Tai Ping yü lan*, k. 750, f. 3v. The expression here used is: 筭策; not yet the *swan* of Swan-pan.

⁹⁷ *Cf.* *Tai Ping yü lan*, k. 750, f. 1. The expression used is 筭.

hand his ivory tallies, he spent his nights in calculating, as if he could not stop.⁹⁸ This is quoted as a proof of his great wealth, as he used his tallies to calculate his income.⁹⁹ The expression "reckon with ivory tallies" 牙籌計, which still remains in literature as an allusion to wealth,¹⁰⁰ is extracted from the above statement.

During the reign of the Emperor Tch'eng (326-343 A.D.) of the following dynasty (the Eastern Tsin), the counting-rods were made of wood, of ivory or of iron. Under the Wei dynasty the Emperor Siuen Wu (500-516 A.D.) regulated the currency, and made counting-rods cast in iron for the use of the people.¹⁰¹

39. It will be deemed unnecessary to accumulate such proofs of the use of the counting-rods during the following centuries; it is plain enough that the swan-pan was not known, and we shall jump at once to the last period where we find the counting-rods in use; it is most likely when the Swan-pan made its appearance. In the *Meng K'i pi h t'an*, a work compiled about the middle of the eleventh century,¹⁰² we hear of an able mathematician,¹⁰³ who could move his bamboo tallies as if they were "flying men" (飛人 = puppets?), and this so quickly that the eye could not

⁹⁸ Cf. *Kih tsh king yuen*, k. 49, f. 7. Cf. also *Tai Ping yü lan*, k. 750, f. 2.

⁹⁹ *Vid.* a short biography of this man, one of the Seven Worthies, in *Mayers' Chinese R. M.*, i. n. 799.

¹⁰⁰ Callery, *Dictionnaire Encyclopédique de la langue Chinoise*, (an adaptation of the *Pei wen yün fu*) vol. i. (only published Paris, 1844, 8vo.), p. 53-54, has been mistaken on the origin of this expression.

¹⁰¹ Cf. 清異錄 in *Kih tsh king yuen*, *ibid.* Here the expression used is 算子.

¹⁰² A. Wylie, *Notes on Chinese Literature*, p. 131.

¹⁰³ Wei Poh, a man of Hwai-nan.

follow the moving nor see anything before the account or result was obtained.¹⁰¹

Now this description is exactly what we should expect of a man knowing the Swan-pan, perhaps only by hearsay, and who wants to show that the tallies had been practised with the same peculiarities as those offered by the counting-board, where the beads are really moved as flying men, and the result only can be seen.¹⁰² This assumption of ours is confirmed, to a certain extent, by this fact, that at the beginning of the Kin dynasty (twelfth century),¹⁰³ mention is made, with praise, of the ability to move the bamboo tallies and dispose the written strokes in order that the eyes might see the calculation. As if in opposition to the Swan-pan which has not this advantage.

These conflicting descriptions show most distinctly the appearance of the counting-board, and the usual struggle of Chinese conservatism, to uphold their ancient systems and to find in them the qualities which are conspicuous by their display or absence in the new.

40. Afterwards we hear no more of the counting-rods or bamboo tallies, as they were ousted by the more convenient swan-pan, but we find nowhere a record of its introduction, for which the Chinese are most likely indebted to foreigners. It is under the Mongol period that we find the notation in strokes, horizontally to be read from left to right as in our notation, and as in the swan-pan practice. The two processes seem to be dependent one on the other or at least narrowly connected, and their parallelism is highly suggestive.

¹⁰¹ *Yuen kien lei han*, k. 331, f. 11.

¹⁰² *Yuen kien lei han*, k. 331, f. 11v.

¹⁰³ The Kin dynasty ruled over the North of China from 1115 to 1234 A.D.

41. An acute student and one of the most voluminous writers on astronomical and mathematical matters, Mei Wuh-ngan, at the end of the seventeenth century, directed his inquiries to ancient calculating instruments;¹⁰⁷ in a special work in which are embodied the results of his researches, which I have not seen, he shows that the use of the abacus in China is comparatively recent, probably not earlier than the twelfth century.

The *Swan fah t'ung tsung*, published in 1593, enables me to give a confirmation of the statement of Mei Wuh-ngan; in a bibliographical list of works on mathematics which I find in the last book or *kiuen* of this treatise are quoted¹⁰⁸ the titles of two works published during the period Shun-hi (i.e. A.D. 1174-1190), the *Pan tchu tsih*¹⁰⁹ and the *Tsue pan tsih*,¹¹⁰ which are the earliest describing the counting *pan* or board. It will be remarked that the compound expression *swan-pan* was not yet made, and that the implement is still described as late as the sixteenth century by the name of *Pan shih*¹¹¹ "board to measure." The two works just quoted are called "Collected notes on the board—heads," and "Collected notes on moving the board;" these titles show how necessary it was to describe the new implement.

CONCLUSION.

42. The various inquiries we have instituted in Linguistics and Palæography, ancient and modern numis-

¹⁰⁷ In his work 古算器考 "Inquiry regarding ancient calculating instruments." *Vid.* A. Wylie, *Notes on Chinese Literature*, p. 91.

¹⁰⁸ *Vid.* *kiuen* xii. f. 25v.

¹⁰⁹ 盤珠集.

¹¹⁰ 走盤集.

¹¹¹ 盤式. *Cf.* *Swan fah t'ung tsung*, k. ii. f. 1.—*Cf.* *pāṭhi*, the common Sanskrit term for the abacus.

matics, mathematical works and historical traditions, have all tended to the same result, a convergence of negative evidence against the supposed antiquity of the Swan-pan in China.

Its name itself is quite modern, and the ancient words meaning "to calculate or reckon" indicate the use of counting rods and tallies from the fourth century B.C. and nothing of any hoard of any kind.

The coin legends of the fourth and third centuries B.C. show a curious and special series of numerals, obviously connected with the counting-rods by their shapes made of straight strokes, and exhibiting a knowledge of place-value which seems to be supported by an example of two centuries earlier. These numerals, as well as the regular ones, were disposed like the writing from right to left, or vertically, and not at all in the *swan-pan* order. The regular numerals which occur on coins since the first century A.D. no more exhibit series over ten. But the knowledge of the value of position and a limited use of the zero, both gained by abridgment, though imperfect as they were, have no more been lost. The numbers on these coins were written with the ornamented numerals which we have seen are nothing else than the written words, and they have nothing to do with any system connected with the *Swan-pan*.

In another line of research we have seen that a great scholar, Ts'in Kiu Shao of the thirteenth century, almost the only mathematician of the Sung dynasty, did use numerals, like the ancient numismatic ones, made of straight strokes with place-value, but in reversed order and increasing from right to left and read as the *swan-pan* and our notation; it is worth remarking that the learned author does not introduce these numerals as newly in-

vented or improved, and that his silence on the subject implies an extensive and practical use of them by all his readers in his time. The cursive characters which later on are introduced to his readers by the author of the *Swan-fah t'ung tsung* (1593) are abridged from the preceding, but their practical use does not necessarily imply place-value, and they do not seem to be of foreign origin.¹¹²

The historical traditions, excepting those of the mythical period, bear only on the counting-rods, which were used with great ability from the fourth century B.C. to the twelfth century A.D., where a curious conflict of testimony in favour of the ancient tallies shows without doubt that the counting-board being introduced at that time, the conservative Chinese endeavoured to uphold the qualities of the ancient instruments, and to find in them not only the same but also some more advantages than in the newly introduced implement. In accordance with this result, the oldest works describing the counting-board appeared at the end of the twelfth century, and an eminent Chinese mathematician, who investigated the matter two hundred years ago, and could dispose of other material than we do, has arrived at the same conclusion, viz. that the *Swan-pan* did not exist in China previously to the twelfth century.

43. Now the question arises to know from where the Chinese have obtained the abacus, as there is no doubt that it is a foreign introduction. Not direct from India; it is principally about or before the time¹¹³ of the celebrated Buddhist astronomer Ih Heng 一行 (717 A.D.) that the

¹¹² On a probable European influence on this simplification, see above n. 84.

¹¹³ *Vid.* A. Wylie, in *Chinese and Japanese Repository*, p. 416. The other traces of Indian influence on Chinese mathematics are posterior to the introduction of the *Swan-pan*. *Vid.* above § 28.

Chinese received what little they seem to have obtained from India.¹¹⁴ We have seen that the *Swan-pan* was not known till four centuries afterwards, and if we consider what China was at the time, not only surrounded in the north, but half swallowed by two powerful states, the Tangut or Ho-si and the Liao and Kin Tartars, in which learning and improvements were far from being despised, and that one had relations with central and western Asia, the probability of its western origin begins to appear. The Taagutans were great traders and carried extensive relations for that purpose; their civilization had a good deal of Indian in it; it is not unlikely that through them the use of this useful instrument was carried to the knowledge of some Chinese. On the other hand, there is a general remark to make on this late appearance of the *Swan-pan*. It occurs after the Taag dynasty, after so many foreign elements and notions had found their way to China. The Arabs and Persians at Canton in the eighth century, the Nestorians in the north-west, the relations with Central Asia not interrupted since the same dynasty, present so many channels by which the Chinese have obtained many notions and elements of progress.

The *Swan-pan* was undoubtedly used in China at the time of Ser Marco Polo, but no mention is made of it in his marvellous book. However, the other absence of reference

¹¹⁴ When M. Reinaud (*Mémoire sur l'Inde*, p. 301; Th. H. Martin, *Recherches Nouvelles concernant les Origines de notre numération écrite*, p. 605, in *Revue Archéologique*, 1857, Paris, 8vo.) said that the Chinese borrowed the system of the value by position and the use of the zero, from the Indians after the fifth century, he was not aware of the peculiarities offered by the numeration on ancient coins which we have seen above §§ 17-21. The reverse may have been the case to a certain extent. See above n. 72.

by the great Venetian traveller to the Chinese art of printing, which was very flourishing in his time, does not permit us to draw any inference from it. We might suggest that he had some dubious reasons to do so; as it is a curious and rather suspicious coincidence that a connection of some kind might be traced up to Venice, for the European art of printing and the knowledge of a peculiarity of the Chinese abacus in the practice of the Bank¹¹⁵ of the bankers.

Having shown in the preceding pages that the Chinese abacus is not of Chinese origin, and that, on the contrary, it is of comparatively modern introduction (twelfth century) into the Middle Kingdom, two results opposed to the opinion hitherto expressed in Europe, we should pass beyond the scope of the present paper and our own capacity, should we go into the rather complicated historical problem presented by the European Abacus and

¹¹⁵ The system of calculating on the *Swan-pan* is much like that which the authors of the fifteenth century called *super lineas et per projectiles*, used in the middle age by the *Argentarii* (Mr. Trentlein has explained this calculation in his work *Das Rechnen im 16ten Jahrhundert*, 1st fasc. of *Abhandlungen zur Geschichte der Mathematik*); their calculations were made on a small table, a bank, whence "faire la banque" and later on the qualification of *bankers* given to the *Argentarii*. On the table were traced horizontal lines representing the different orders of decimal units; pebbles or *projectiles* were placed on the lines to indicate the units of the line, but the pebbles placed over were worth 5. This peculiarity has been considered lately (cf. L. Rodot, *Le Swan-pan des Chinois et la Banque des Argentiers*, pp. 165, 166, 168, in *Bulletin de la Société Mathématique de France*, t. viii. (1880, Paris, 8vo.) as of prime importance, inasmuch as it exists in the *Swan-pan* calculation, without any attempt at a connection, which, however, does not seem unlikely, if the Venetian traders in Central Asia have brought back that notion to their brethren. Are not the Venetians those who have renewed the ancient trade and began again the business of the *Argentarii*?

the Indian *Páthi*, with its further complication of the undefined (improved combination of the earlier dust-writing and pebbles- (or cowries-)heaping boards) Asiatic antecedent of the latter and of the Chinese *Swan-pan*, and the questions of derivation, improvement, or parallel descent implied by their obvious connection.

TERRIEN DE LA COUPPERIE.

LONDON, May, 1883.

For easier reference, I add a summary of the whole paper.

- PROLEGOMENA.—§§ 1. Curious difficulty of researches in Chinese literature.—2. Commentaries and texts.—3. Ready-made solutions in Europe. Another difficulty.—4. The Swan-pan known in Europe.—5. In Russia, France, England; in Japan.—6. No special record of the Swan-pan.—7. We shall follow the negative method.
- A. LINGUISTIC AND PALÆOGRAPHICAL EVIDENCES.—§§ 8. No special pictorial character for the "counting-board."—9. *Pan* and *swan* in the rituals.—10.—The three Rituals, spurious compilations of the Han period.—11. *Swan*=counting-rods.—12. Another character *Swan*.—13. The *Shen* or tallies.
- B. NUMISMATIC NUMERALS EVIDENCE.—§§ 14. Evidence of ancient Chinese coins; first time adduced.—15. Barter at early period.—16. Coinage begins in the sixth century B.C.—17. Characteristics of the legends.—18. Table of the numerals of the fourth and third centuries B.C.—19. Remarks on the single figures.—20. The double figures exhibit the *value by position*.—21. An example of the value by position in the sixth century B.C.—22. Order of these numerals contrary to the *Swan-pan*.—23. These numerals still used in the sixth century A.D.—24. Numerals in small seal character contrary to the *Swan-pan*.—25. Ornamented numerals.—26. Their origin according to the K'ang-hi Tze-tien.—27. According to palæography. No connection with the Swan-pan.

- C. MATHEMATICAL EVIDENCE.—28. Value by position known in the thirteenth century.—29. Instance of numbers and numerals. X for 4.—30. Different in order from the ancients.—31. The cursive numerals.—32. Their Chinese origin.—33. Their various names.
- D. HISTORICAL EVIDENCE.—§§ 34. Mystic traditions worthless.—35. References to the counting-rods.—36. Hiao-tze (fourth century), Tehwang tze (fourth century).—37. Teh'ao T'ao (third century), Sang Hung (second century B.C.).—38. Wang Jung (third century A.D.) and others of the fourth and sixth centuries.—39. Conflicting evidence of the twelfth century.—40. Corresponds with the new direction of numerals.—41. Other proofs in favour of the twelfth century.
- CONCLUSIONS.—§§ 42. Résumé of the various evidence.—43. The Swan-pan known in China from Central Asia in the twelfth century.

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THE END.



PROCEEDINGS OF THE NUMISMATIC SOCIETY.

SESSION 1882—1883.

OCTOBER 19, 1882.

W. S. W. VAUX, Esq., F.R.S., Vico-President, in the Chair.

The following presents were announced and laid upon the table :—

1. *Bulletino dell' Istituto di Corrispondenza Archeologica*, 1881, Parts XI., XII.; 1882, Parts I.—IX. From the Imperial German Archæological Institute.

2. *Bulletins de la Société des Antiquaires de l'Ouest*, 1882. 1^{er} trimestre. From the Society.

3. *Sitzungsberichte der K. Preussischen Academie der Wissenschaften zu Berlin*, 1882, Parts I.—XXXVIII. From the Academy.

4. *Monatsbericht* of the same, 1881, November and December.

5. *Aarbøger for Nordisk Oldkyndighed og Historie*. 1880, Part II. with *Mémoires*, 1880, and *Tillæg*, 1880; 1881, Parts I., II., and III., with *Tillæg*, 1881; 1882, Parts I., II., and IV., with *Mémoires*, 1881. From the Royal Society of Northern Antiquaries.

6. *Jahrbücher des Vereins von Alterthumsfreunden im Rheinlande*. Parts LXX.—LXXII. From the Society.

7. *Publications de la Section Historique de l'Institut Royal*

Grand-ducal de Luxembourg, 1881, Tome 35 (xiii). From the Institute.

8. Bulletin historique de la Société des Antiquaires de la Morinie; 81^e année, N.S. 122^e livraison. From the Society.

9. Notice historique of the same Society. By M. E. Dramard. From the Society.

10. Annuaire de Numismatique, 1882, 3^e and 4^e trimestres. From the French Numismatic Society.

11. Revue Belge de Numismatique, 1882, 3^e and 4^e livraisons. From the Belgian Numismatic Society.

12. Bulletin mensuel de Numismatique et d'Archéologie, 2^e année, No. 1, July, 1882. From M. R. Serrure.

13. Numismatische Zeitschrift, 1881, Heft II.; 1882, Heft I. From the Numismatic Society of Vienna.

14. Verzeichniss der Dubletten des K. Münzkabinet zu Berlin. Sale Catalogue.

15. Report of the Proceedings of the Numismatic and Antiquarian Society of Philadelphia, 1881. From the Society.

16. The Journal of Hellenic Studies, vol. iii, No. 1, 1882. Text and Plates. From the Society.

17. Proceedings of the Society of Antiquaries of Scotland, N.S., vol. iii. From the Society.

18. Archæologia Cantiana, vol. xiv. From the Kent Archæological Society.

19. The Journal of the Royal Asiatic Society, N.S. vol. xiv., Part III. From the Society.

20. Report of the Government Central Museum, Madras, 1881—2.

21. Proceedings of the Society of Antiquaries of London, vol. viii., No. 5. From the Society.

22. Journal of the Royal Historical and Archæological Association of Ireland, 1882, Nos. 49 and 50. From the Association.

23. Irish Coins of Richard III. By Aquilla Smith, M.D. From the Author.

24. On a hoard of Roman Coins found at Deal. By C. Roach Smith, Esq. From the Author.

25. Early History of the Mediterranean Populations. By Hyde Clarke, Esq. From the Author.

26. On the Genealogy of Modern Numerals. By Sir Edward Clive Bayley. From the Author.

27. Roman Coins at Eton College. By the Rev. F. St. John Thackeray. From Barclay V. Head, Esq.

Mr. E. K. Burstal exhibited a gold coin of the British prince Andoco(mius), found at Thame, and a rare half-groat of Henry VI. (light weight).

Mr. R. A. Hohlyn exhibited a set of the touch-pieces struck by the Stuarts, viz., Charles II. (in gold); James II. (in gold); James II., from a different die (in silver); the Chevalier St. George as James III. (in silver); the younger Pretender as Charles III. (in silver); Henry, Cardinal York, as Henry IX. (in silver); Anne (in gold). Before the reign of Charles II. no coins were struck especially for touch-pieces, the gold "angel" having been used for the purpose. The touch-pieces are all similar in design. Those of the Pretenders, however, which were struck abroad, are of much better work than those made in England. Mr. Hohlyn remarked that Anne was the last English sovereign who touched for the "king's evil," George I. having been, it is said, in the habit of referring all applicants to James Edward, the elder Pretender. These touch-pieces (all of them perforated) are curious relics of a superstition which had existed for many centuries, and was only stamped out on the accession of the Brunswick dynasty.

Professor Gardner read extracts from a paper describing the coins of the island of Samos, and discussing the historical facts to be gleaned from them.

The paper is printed in vol. ii., p. 201.

NOVEMBER 16, 1882.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the
Chair.

The following gentlemen were elected members of the
Society:—

W. S. Bird, Esq., Hyde Clarke, Esq., T. W. Grsone, Esq.,
W. G. L. Harvey, Esq.

The following presents were announced and laid upon the
table:—

1. *Bulletino dell' Istituto di Corrispondenza Archeologica*.
Part X., October, 1882. From the Imperial German Archæo-
logical Institute.

2. *Catalogo das Monedas Arabes in the Lisbon Mussum*.
By J. Pareira, 1882. From the Author.

3. *Berlin, Moskan, St. Petershurg, 1649—1763*. By the
Baron von Koohne. From the Author.

4. *The American Journal of Numismatics*. Vol. xvii., No. 2.
From the Society.

5. *The Canadian Antiquarian and Numismatic Journal*.
Vol. xi., No. 1. From the Society.

6. *The Journal of the Royal Historical and Archæological
Association of Ireland*. Vol. v., 4th Series, No. 51. From the
Association.

7. *The Journal of the Royal Asiatic Society*. N.S., vol. xiv.,
Part IV. From the Society.

Mr. A. J. Evans exhibited a very beautiful tetradrachm of
Alexander the Great, with a wreath in front of the figure of
Zeus on the reverse (Müller, 548), and a tetradrachm of Mace-
donia as a Roman province, signed by the Quæstor Æsillas
(circa B.C. 90).

Miss A. Lucas sent for exhibition a cast of a rare silver
medallion of the Emperor Geta, with the three monetæ on the
reverse and the legend AEQVITATI PVBLICAE.

The Rev. H. C. Reichardt communicated a description of an unedited coin of John Hyrcanus I., similar in type to the coin of Alexander Jannæus figured in Madden's "Coins of the Jews," p. 85, No. 2. See vol. ii. p. 306.

Mr. H. Montagu exhibited a Tower crown of Charles I., with the harp mint-mark, which differed from the ordinary type (Hawkins, 474) in having a plume over the shield on the reverse.

Mr. R. Day exhibited some specimens of the so-called Cork siege-pieces, or money of necessity, which are assigned by Lindeay in his "Coinage of Ireland" to the year 1641. Mr. Day, however, was able to prove that the coins in question were subsequent to 1677, one of the specimens being struck on a token of that date. See vol. ii. p. 353.

Mr. Bliss exhibited a pattern for an English halfpenny of the decimal coinage, struck in 1859.

Mr. A. Durlacher exhibited specimens in silver and bronze of a medal struck in commemoration of the fiftieth season of the Sacred Harmonic Society, founded in 1832.

M. Terrien de La Couperie communicated a paper on Chinese paper-money, and exhibited a specimen of that currency issued in the reign of the Emperor Hien-Tsung of the Tang dynasty, A.D. 806. This is printed in vol. ii. p. 334.

Mr. B. V. Head read a paper by Dr. A. Smith, "On the Date of the Earliest Money struck in Ireland," vol. ii. p. 308.

DECEMBER 21, 1882.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the
Chair.

M. A. Chabonillet, Conservateur du Cabinet des Médailles et Antiques à la Bibliothèque Nationale, Paris, and M. l'Intendant General Ch. Robert, Membre de l'Institut, were elected hono-

rary members, and the Rev. G. F. Crowther, M.A., an ordinary member of the Society.

The following presents were announced and laid upon the table:—

1. The Successors of the Seljuks in Asia Minor. By Stanley Lane-Poole, Esq. From the Author.

2. Observations sur les Monnaies Mérovingiennes. By M. Ch. Robert. From the Author.

3. Mélanges d'Archéologie et d'Histoire. By M. Ch. Robert. From the Author.

4. Monnaies Ganloises. By M. Ch. Robert. From the Author.

5. Médaillons Contorniates. By M. Ch. Robert. From the Author.

6. A brief history of the soldiers' medals of West Virginia. By the Rev. H. E. Hayden. From the Author.

7. Bulletin de la Société des Antiquaires de l'Ouest, 1882, 2^{me} trimestre. From the Society.

Mr. R. A. Hoblyn exhibited a collection, almost complete, of the coins and tokens of the Isle of Man, forming a nearly perfect illustration of Dr. Clay's "Currency of the Isle of Man." The collection comprised Hutton's token, 1657, the St. Patrick pieces, the cast coins of 1709, patterns of 1729, currency of 1733, 1758, 1786, 1798, 1813, 1839, together with nearly all the known tokens from 1811 to 1831. The patterns of 1724 and 1782 were wanting, and Mr. Hoblyn thought were probably only to be found in Dr. Clay's collection. The original motto on the coins of the Isle of Man prior to 1733 was QUOCUNQUE GESSERIS STABIT. It was then altered to QUOCUNQUE JECERIS STABIT.

Dr. A. Smith communicated a paper "On the Human Hand as a Symbol on Hiberno-Danish Coins found in Ireland." See vol. iii. p. 92.

Mr. H. H. Howorth communicated a paper in which he pro-

posed various reattributions of Greek, Roman, and British coinage.
See vol. iii. p. 20.

JANUARY 18, 1883.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the
Chair.

Mr. R. K. Walker was elected a member of the Society.

The following presents were announced and laid upon the
table:—

1. *Zeitschrift für Numismatik*. Band x., Heft 3. From the
Editor.

2. *Revue Belge de Numismatique*, 1883. 1^{re} livraison.
From the Belgian Numismatic Society.

3. Report of the Council of the Art Union of London, 1882.
From the Union.

Mr. Evans brought for exhibition four varieties of the Pontefract Castle siege-piece dated 1648; two issued in the reign of Charles I., and two after his death.

Mr. B. V. Head exhibited a silver medal struck to commemorate the erection of the Egyptian obelisk in the Central Park of New York.

Mr. J. G. Hall exhibited a specimen of the "Rebellen Thaler" of Henry Julius, Duke of Brunswick-Wolfenbüttel, 1595, on the reverse of which is a representation of the destruction of Korah, Dathan, and Abiram, accompanied by the letters N. R. M. A. D. I. E. S., supposed to stand for "Non recedit malum a domo ingrati et seditiosi." This was probably intended as a warning to the citizens of Brunswick, with whom the Duke was then at feud on the question of rights and privileges.

Mr. H. Montagu exhibited an unpublished rose-noble of Edward IV. in fine preservation, also unpublished varieties (1)

of the noble of Edward III., and (2) of the light noble of Henry IV. See vol. iii. p. 61.

Mr. E. H. Bunbury communicated a paper on some unpublished tetradrachms bearing the name of Alexander the Great. See vol. iii. p. 1.

FEBRUARY 15, 1883.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the Chair.

Mr. Constantine Alexander Ionides and Mr. Francis E. Whelan were elected members of the Society.

The following presents were announced and laid upon the table:—

1. *Journal of Hellenic Studies*. Vol. iii., No. 2. Text and Plates. From the Society.

2. *Mélanges de Numismatique*. Tome iii., 1882. From the Editor.

3. *Journal of the Royal Asiatic Society*. N.S., vol. xv., Part I. From the Society.

4. *Foreningen til Norske Fortidsmindesmerkers Bevaring*. Aarsberetning for 1881, with atlas. From the Society.

5. *On the Genealogy of Modern Numerals*, Part II. By Sir Edward Clive Bayley. From the Author.

6. *Proceedings of the Society of Antiquaries of London*. 2nd Series, vol. viii., No. 6. From the Society.

7. *Bulletin Historique de la Société des Antiquaires de la Morinie*. N.S., 124^e livraison. From the Society.

8. *Journal of the Royal Historical and Archaeological Association of Ireland*. No. 52, October, 1882. From the Association.

Mr. Vaux exhibited ten gold coins from the cabinet of Mr. A. Grant, comprising one of the Ommiade Khalif Heshâm (A.H. 124); two of Harun al-Rashid, one of which had the name

Daúd beneath the legend on the reverse (A.H. 174); one of Al-Amin, son of Al-Raschid; one of Mahmud of Ghazna (A.H. 400); and five of the great Seljuk chief, Tughril-Beg, with the dates A.H. 432, 434, 436, and 448, two from the mint of Niehapúr, and three from that of Isfahan.

Mr. J. G. Hall exhibited a gold florin of John II. of Nassau, Archbishop of Mayence, 1397—1419, struck at Bingen, with the inscription MONETA OPIDI PINGENSIS on the reverse, accompanied by the wheel, the arms of Mayence.

Mr. H. Montagu brought for exhibition three fine "nute" of Charles I., with the harp, bell, and portcullis mint-marke; the Bermuda halfpenny of 1793 in gold, silver, and bronze; also a shilling of William III., reading DEI GRI (*sic*), 1699.

Mr. R. A. Hoblyn showed thirteen impressions from the dies of pattern and other coins of George III. and George IV., presumed to have belonged to the late B. Pistrucci, chief engraver of the Mint.

Mr. Copp exhibited the silver medal of the Smoke Abatement Exhibition, 1882, engraved by Meers. Wyon.

Mr. Evans exhibited a tetradrachm of Alexander the Great, with the head on the obverse to the left, and with a bee as an adjunct symbol on the reverse. This coin was of European fabric, and probably struck at Melitea in Theessaly.

Mr. H. Montagu communicated a paper on silver types of Northumbria and York. See vol. iii. p. 26.

Canon Pownall read a paper on Papal medals of the fifteenth century. He also contributed some remarks on the rose mint-mark on Irish money of the sixteenth century. See vol. iii. pp. 186 and 60.

MARCH 15, 1883.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the Chair.

The Rev. C. R. Durrant, M.A., and the Rev. William Wright, D.D., were elected members of the Society.

The following presents were announced and laid upon the table:—

1. Publications de la Section Historique de l'Institut Royale Grand-ducal de Luxembourg, Année 1883. Part XXXVI. (XIV). From the Institute.

2. Report of the Proceedings of the Numismatic and Antiquarian Society of Philadelphia, 1882. From the Society.

8. Proceedings of the Davenport Academy of Natural Science. Vol. iii., No. 1, 1879, and vol. iii., Part II., 1882.

Mr. F. Whelan exhibited a selection of Italian and German medals from the collection of Sir W. F. Douglas, comprising a remarkably fine specimen of Vittore Pisano's medal of Domenico Malatesta, called Novello; a medal of Mohammad II., conqueror of Constantinople, by Gentile Bellini; a medal of Christian I., King of Denmark, Norway, and Sweden, commemorating his visit to Rome in 1474, by Melioli; a medal of Camilla Brondelmonte by the Florentine medallist known as the "Médailleur à l'Espérance;" a very interesting Venetian medal of Gianbattista Bontigario and his brother Ercole, dated 1520, by an unknown artist; a lead medal of Geneva Bentivoglio, resembling in style the works of the medallist Laurana. Geneva Bentivoglio was the natural daughter of Galeazzo Sforza, Lord of Pesaro, and wife of Giovauni Bentivoglio, the last Lord of Bologna. There were also two fine Flemish medals of Charles the Rash, Duke of Burgundy, and of his son Antoine, the "Bastard of Burgundy," and two very beautiful sixteenth-century German medals.

Mr. Hoblyn brought for exhibition a silver medal struck on the occasion of the re-institution of the Order of the Garter by Charles II. in 1678. *Obv.* St. George and the Dragon; inscription, "Eu bonneur du Souverain du très noble ordre de la lartière." *Rev.* wreath, within which inscription, "Du très haut très puissant et très excellent Prince Charles II. par la grace de Dieu roy de la Grande Bretag: Fran: et Irlande Défenseur de la Foy MDCLXXVIII." Mr. Hoblyn also showed

a selection of patterns, proofs, and fine impressions of English, Irish, and Scottish halfpennies from Charles II. to Victoria.

Mr. J. G. Hall exhibited a selection of ecclesiastical coins in gold and silver of the Popes Martin V., Nicholas V., Alexander VI., Paul III. and IV., and Pius IV.; of the Archbishops of Treves, Bohemund II., 1354—1362, and Cuno II. von Falkenstein, 1362—1368; of the Archbishops of Cologne, Walram, Count of Jülich, 1332—1349, Wilhelm von Gennep, 1349—1362, Friedrich III., Count of Saarwerden, 1370—1414, and Dietrich II., Count of Mörsz, 1414—1463; of the Bishops of Würzburg, Gerbard von Schwarzburg, 1372—1400, and Godfried von Limpurg, 1443—1455; and of the Bishop of Durham, Sever or Sevever, 1502—1505.

Mr. R. A. Hoblyn read a paper, communicated by Mr. Wakeford, on a hoard of early English coins of Henry I. and Stephen, lately found by some labourers while trenching a piece of waste land in the parish of Linton, about three miles from Maidstone. See vol. iii. p. 106.

APRIL 19, 1883.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the Chair.

The following presents were announced and laid upon the table:—

1. Retrospectiones, Social and Archæological. Vol. i., 1883. By C. Roach Smith, Esq., F.S.A. From the Author.
2. Catalogue of Greek coins in the British Museum, Thessaly to Aetolia. By P. Gardner. The Ptolemies, Kings of Egypt. By R. S. Poole. From the Trustees of the British Museum.
3. Revue Belge de Numismatique, 1883. 2^{me} livraison. From the Belgian Numismatic Society.
4. Annuaire de la Société française de Numismatique, 1883. 2^{me} trimestre. From the French Numismatic Society.

5. Mémoires de la Société de Borda, Dax, 1883. 1^{re} partie. From the Society.

6. Mémoires de la Société des Antiquaires de l'Onest. Vol. iv., 2^{me} Série, 1882. From the Society.

7. Sitzungsberichte der Königlichen Preussischen Akademie der Wissenschaften. Berlin, 1883. Parts XXXIX.—LIV. From the Academy.

8. Provincial Tokens. By Charles Williams. From the Author.

Mr. Evans exhibited a seventeenth-century medal, or possibly the centre of some piece of plate, having on one side the arms of the Emerson family, and on the other the inscription FLOREAT ANGLIA IN VERA RELIGIONE PROTESTANTE.

Mr. H. Montagu exhibited a penny of the second coinage of Alexander III. of Scotland, with the name of the moneyer, WALTER ON RAN (Renfrew), on the reverse; also a half-crown of Charles II., 1670, by the medallist John Roettier, with a blundered inscription. Mr. Montagu also exhibited two blundered shillings of William III.

Mr. A. Peckover exhibited some silver coins lately discovered in the Oxus, the most important of which was an Eastern copy of a tetradrachm of Athens, having an Aramaic inscription beside the owl on the reverse.

The Rev. J. H. Pollexfen exhibited a sovereign and a crown of George III., by Pistrucci, and drew attention to the letters W. W. P. (William Welleale Pole, Master of the Mint) on the buckle of the garter on the reverse.

Mr. J. G. Hall exhibited coins of Henry II. and Herman IV., Archbishops of Cologne, Frederick III. of Saxony, William IV. of Juliers, the Emperor Charles V., and others, as illustrating the earliest examples of the use of Arabic numerals for dating the coins.

Mr. Trist exhibited a case containing scales and coin-weights of various countries made in 1596.

Dr. A. Smith communicated a paper on an unedited half-groat of Edward IV., struck at Galway.

The Rev. J. H. Pollexfen read a paper on a long-rose penny of Alexander III. of Scotland, with the moneyer's name, WALTER ON GLE ? (Glasgow), on the reverse.

A discussion followed, in which the President said that he was inclined to attribute the coin to Renfrew, and to read RA instead of GLE.

Mr. E. Thomae communicated a paper on the coins of the East India Company struck in Bombay under the charter of Charles II. See vol. iii. p. 40.

MAY 17, 1883.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the Chair.

George White, Esq., was elected a member of the Society.

The following presents were announced and laid upon the table:—

1. *Bulletino dell' Istituto di Corrispondenza Archeologica*, 1882, Nos. 11 and 12, with list of members; and 1883, Nos. 1—4.

2. *Zur Münzkunde Kilikiens* von Dr. F. Imhoof-Blumer. From the Author.

3. *Mallos, Megareos, Antioche du Pyramos*. By Dr. F. Imhoof-Blumer. From the Author.

4. *Zeitschrift für Numismatik*. Band x., Heft 4. From the Editor.

5. *The Canadian Antiquarian and Numismatic Journal*. Vol. xi., No. 2. From the Society.

6. *Proceedings of the Numismatic and Antiquarian Society of Philadelphia*. January, 1883. From the Society.

7. *Journal of the Royal Asiatic Society*. Vol. xv., Part II. From the Society.

8. *Journal of the Royal Historical and Archaeological Association of Ireland*. Ser. iv., vol. vi., No. 58. From the Association.

9. Aarbøger for Nordisk Oldkyndighed og Historie, 1882. Parts III. and IV., with supplement, and 1883, Part I. From the Royal Society of Northern Antiquaries.

10. Bulletin Historique de la Société des Antiquaires de la Morinie. N.S., livraison 125. From the Society.

11. Australian Tradesmen's Tokens, London, 1888. By C. W. Stainsfield. From the Author.

12. The coinage of the United States of America. By H. Phillips, jun. From the Author.

Mr. J. G. Hall exhibited a selection of mediæval coins of various countries, with a seated figure for type.

Mr. J. W. Trist exhibited a medal struck in Holland in 1579, referring to the execution of Counts Egmont and Horn.

Mr. H. S. Gill exhibited a counterfeit sterling of William, Count of Namur.

Canon Pownall exhibited two medals of Pope Callixtus III., signed by an engraver G.P., thought by him to stand for G. Paladino. One of the medals recorded a naval victory over the Turks.

Sir H. Lefroy communicated on account of the discovery of a new denomination of the Bermuda hog-money, of the current value of threepence. See vol. iii. p. 117.

A paper by Sir H. Lefroy was also read on a curious expedient adopted in the early part of the present century in New South Wales for making the Spanish dollar, worth 4s. 2d., do duty for 6s. 3d. Specimens both of the disc (inscribed FIFTEEN PENCE) and of the outside ring (inscribed FIVE SHILLINGS) were exhibited by Mr. F. W. Pixley. See vol. iii. p. 119.

Mr. H. S. Gill read a paper on seventeenth-century tokens of Hampshire not described in Boyno's work. See vol. iii. p. 121.

Mr. E. H. Bunbury communicated a paper on the coins of the Seleucids. See vol. iii. p. 65.

Mr. B. V. Head gave an abstract of a paper by M. de La Cou-

perie on the date of the introduction into Chioa of the abacus, or calculating hoard, called hy the Chinesee *sican-pan*. See vol. iii. p. 297.

JUNE 21, 1883.

ANNIVERSARY MEETING.

JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., President, in the Chair.

The Minutee of the last Annivereary Meeting were read and confirmed.

Thomas W. Goodman, Esq., and Robert Hohart Smith, Esq., were elocted members of the Society.

The Report of the Council was then read to the Society as followe :—

GENTLEMEN,—The Council again have the honour to lay before you their Annual Report as to the etate of the Nmismatic Society.

With great regret they have to announce their loss by death of the five following members :—

John Davidson, Esq.
Dr. W. Freudenthal.
Rev. H. R. Huckin, D.D.
James White, Esq.
Jamee Whittall, Esq.

And hy resignation of the following three members :—

W. Blades, Esq.
G. Coffey, Eeq.
H. E. Williame, Esq.

On the other hand the Council have much pleasure in recording the election of thirteen ordinary and two honorary members :—

Ordinary Members.

W. S. Bird, Esq.	Constantine Alexander Ionides,
Hyde Clarke, Esq.	Esq.
Rev. G. F. Crowther, M.A.	R. Hobart Smith, Esq.
Rev. C. R. Durrant, M.A.	R. K. Walker, Esq., M.A.,
T. W. Goodman, Esq.	B.E.
T. W. Greene, Esq., B.C.L.	F. E. Whelan, Esq.
W. G. L. Harvey, Esq.	George White, Esq.
Rev. W. Wright, D.D.	

Honorary Members.

M. A. Chabonillet, Conservateur du Cabinet des Médailles et Antiques à la Bibliothèque Nationale, Paris; M. l'Intendant General Ch. Robert, Membre de l'Institut.

According to our Secretary's Report our numbers are, therefore, as follows:—

	Ordinary.	Honorary.	Total.
June, 1882	210	37	247
Since elected	13	2	15
	223	39	262
Deceased	5	—	5
Resigned	8	—	3
Erased	—	—	—
Jnno, 1883	215	89	254

The Council have also much pleasure in announcing that they have decided to award a medal, in the name of the Numismatic Society of London, from time to time to distinguished numismatists, and to inform the Meeting that this year the medal (the dies for which have been presented to the Society by the President) has been awarded to Charles Roach Smith, Esq., F.S.A.

The Treasurer's Report was then read to the Meeting, by which it appeared that the balance in hand on June 21 was £248 14s. 5d. This Report is appended.

The President, in handing the medal to Mr. C. Roach Smith, addressed him as follows :—

I have much pleasure in handing to you the medal awarded to you by the Council of this Society in recognition of your services to numismatic science, more especially in connection with the Romano-British series. It is the first that the Council has had the opportunity of awarding, and it is satisfactory to think that the recipient is one who was an original member of the Society when it was founded, now more than forty-six years ago, and who for some years held office as one of its honorary secretaries. Of the interest you have taken in numismatic science your numerous papers in our Journal afford sufficient evidence. But the place which the testimony of coins has had assigned to it in your various independent works, the manner in which any discoveries relating to the coinage of this country have been treasured up in your *Collectanea Antiqua* and other archaeological publications, and especially your series of articles on the coins of Carausius and Allectus, deserve the gratitude of all who are interested in the advancement of numismatic knowledge. After so many years of assiduous devotion to antiquarian pursuits you are now engaged in gathering together the reminiscences of your past career, and I venture to trust that among your future retrospections the looking back upon this record of our appreciation of your labours may not be among the least pleasing.

Mr. C. Roach Smith having thanked the Council and Society for the honour conferred upon him, the President delivered the following address :—

As you have done me the honour of still retaining me in office as your President, it again becomes my duty to offer you a few words, principally by way of retrospect over the year that has just elapsed. You have heard from the Report of the

Council, and from that of our Treasurer, that the Society and its finances continue to be in a prosperous condition so far as numbers and means are concerned, so that on those heads I need do no more than offer you my congratulations. With regard to the future of the Society, it is to be hoped that the power which the Council now possesses of bestowing medals for distinguished services to numismatic science may to some extent add to the influence of the Society in promoting numismatic pursuits. It will, at all events, enable us to show our appreciation of men who, like Mr. C. Roach Smith, the first recipient of the medal, have devoted a large portion of a long life to the furtherance of numismatic and archaeological science; and the prospect of possibly having their labours thus acknowledged may encourage the younger generation of numismatists in their researches. The idea of the bestowal of medals by the Society is by no means new. It was, indeed, contemplated in our earliest Rules and Regulations, but nothing was done to carry the idea into practical effect. It would indeed have still lain dormant had not some of the members of the Council, and notably Canon Pownall, brought the matter under discussion; and though at first I did not eagerly accept their views, the hope that such a medal might both stimulate the ambition of the young numismatist and also afford a means of recognition of the labours of the veterans in our science, has induced me to take upon myself to offer a pair of dies for the medal to the Society, which the Council has done me the honour to accept on its behalf.

With regard to the regulations as to future awards of the medal, it will be well here to place on record the conditions under which it may be bestowed, in the form in which they have been approved by the Council.

Conditions under which the medal of the Numismatic Society of London may be awarded:—

1. A medal in bronze or silver may be awarded not oftener than once in each year, but not of necessity so often, to

some person highly distinguished for services to numismatic science.

2. The recipient may be of either sex or of any country.

3. The award shall be made by the President and Council of the Society, who shall at one of their meetings discuss the merits of candidates proposed as recipients of the medal, and at some subsequent meeting shall award it by ballot.

4. Due notice shall be given to each member of the Council of the day when the discussion and ballot are to take place.

5. No medal shall be awarded unless the candidate obtains the vote of at least two-thirds of those present at the meeting.

6. Members of the Council for the time being shall not be disqualified as candidates for the medal, but in their case the vote must be unanimous.

With regard to the design of the medal itself, it may not be out of place to say a few words. The principal device on the obverse, the *Tres Monetae*, is the time-honoured emblem of the Society, which has appeared upon its seal ever since its foundation. The figures are, however, treated somewhat differently from what they are upon the seal, the general design being borrowed from a medallion of Severus Alexander, of which an example¹ is in the British Museum. In the exergue are the words *MON. AVG.*, and the epithets around *TESTIS TEMPORVM, NVNCIA VETVSTATIS, VITA MEMORIAE* are taken from Eletrack's engraved frontispiece to Sir Walter Raleigh's "History of the World," published in 1611. On the frontispiece, however, these are only three out of the four "proper titles" of "the Mistress of Man's life, grave Historie," which in "the Minde of the Front" are thus Englished, "Time's Witnesse; Herald of Antiquity, the Light of Truth, and Life of Memory." As symbols in the exergue are the pincers or pinches of Mr. Pinches, the engraver, and my own crest of

¹ B. M. Catalogue, Roman Medallions, Pl. XXXVIII., Fig. 8.

the elephant's head conped. The wreath on the reverse is taken from one on a large brass coin of Caligula, and the lettering and arrangement of the inscription are after the new-year medallion of Antoninus Pius, with S.P.Q.R. A.N.F.F. OPTIMO PRINCIPI PIO.

Having thus to some extent described the process of evolution by which the medal has come into existence, I need say no more on that head, beyond again wishing a prolonged and happy old age to its first recipient, and will pass on to a slight review of what the Society has done during the past year.

Foremost among the papers communicated to us I must place that on Samos and Samian coins by our foreign secretary, Prof. Percy Gardner, the merits of which have been recognised by the Allier d'Hauteroche prize having been awarded to its author, jointly with Mr. Head, for his "Guide to the Coins of the Ancients," 1881, by the French Institute. There are not many of the Grecian states the coins of which can rival those of Samos either in their number or in the period over which they extend; and on some of these we have already had exhaustive monographs in the Numismatic Chronicle, to which Prof. Gardner's essay forms an admirable sequel. After pointing out the principal religious cults of the place, he shows how in the case of Samos they reacted even in a stronger degree than customary upon the types selected for the coinage. The lion's scalp appears to be the emblem either of Hera or Dionysos, the bull possibly that of Hera, as are the peacock and the sceptro; while the galley appears rather to represent the special war-vessel of the place invented by Polycrates. On some of the later coins again appear types representative of some well-known statues of Hera and Aeneas. The coinage is divided into nine distinct stages, beginning with the electrum and silver coins of the sixth century B.C., and ending with those of imperial Roman times. Nor are the coins of the Samian colonies omitted. The standards of coin-weights are discussed, lists of magistrates' names are given, and in the

ninety pages over which the essay extends the details of the numismatic history of Samos are unfolded, while they are also made to illustrate the political and religious life of the state. We must all hope that there are more such states left in Greece for Prof. Gardner's industrious researches to conquer, and that our Chronicle may have the privilege of recording his conquests. While speaking of this paper, we may take the opportunity of congratulating him upon the publication of his elaborate work upon the types of Greek coins, which is at once the most important and the most handsome numismatic work which has appeared in England in the course of the past year. It may, indeed, be doubted whether any series of plates has ever been published so well calculated to give a correct impression of Greek medallion art, or whether any previous author has adopted so satisfactory a method of treating of its origin and development.

But to return to the communications which have been made to the Society. Among those relating to Greek numismatics we have received two from the experienced pen of Mr. Edward H. Buxbury. The first of these relates to the series of beautiful tetradrachms bearing the name of Alexander the Great, and forms a supplement to a paper communicated to the Society some fifteen years ago. Some of these coins appear, from the symbols upon them, to be attributable to various mints both in Greece and Asia Minor, and one which by the author is with some hesitation attributed to Sicyon, is of special interest as bearing upon it the miniature representation of a statue of Hercules, not improbably that by Lysippus, which was seen by Pausanias in the Agora of Sicyon, and which seems to have been the original from which the Farnese Hercules was copied by the Athenian sculptor, Glycon. Appended to this paper are some remarks on the important question as to how far the attribution of the Alexander tetradrachms to different mints by means of the symbols upon them is to be trusted, and on this point there appears to have been some difference of opinion

between Mr. Bunbury and Mr. Head. The explanation of the latter, which follows the paper of the former, seems, however, to show that there is, after all, no very great divergence of opinion between them. When once the fact is recognised that this series of tetradrachms extends over a much longer period than the reign of Alexander, there is no difficulty in seeing that the symbols upon the regal coins—that is, those struck during the life of Alexander and within his dominions—may, and probably do, bear a different signification from those on pieces struck after his death as autonomous municipal coins of cities which for commercial reasons found it convenient to imitate the types of the well-known coins of Alexander. On these latter some symbol of the place of mintage was almost a matter of necessity, while on the regal coins of Macedon such marks of autonomy would be out of place, though symbols of the officers of the regal mints might well make their appearance on the coins.

The second paper by Mr. Bunbury is on some rare and unpublished coins of the Seleucidan kings of Syria, and is designed to supplement and in some respects to correct the catalogue of the coins of that series in the British Museum, published by Prof. Percy Gardner in 1878.

Among the rarer coins of which descriptions are given is one bearing on the reverse the name of Antiochus, but on the obverse an aged bust with a bull's horn above the ear, which Mr. Bunbury is inclined to regard as that of Seleucus. It may be that the coin was struck during the joint reign of the two kings; or possibly, like Lysimachus, Antiochus may have thought well to place the well-known portrait of his predecessor on some of his coins. An important feature in this paper is the discussion as to the proper attribution of the coins bearing the name of Antiochus among the first four monarchs of that name. The subject is one of great difficulty, especially as regards the coins of Antiochus II. and of Hierax, and the long and patient investigation of this series by the author of the

paper renders any opinion he expresses of high value. Several remarkable coins of the later Syrian kings are also described and figured, and any future attempt to classify and describe the Seleucid series will be incomplete without a full and careful study of this paper.

The only other paper relating to ancient classical numismatics is one by Mr. H. H. Howorth, in which he suggests some few reattributions. Some suggestions relate to Seleucid coins, especially to one attributed in the Museum Catalogue to Antiochus I., but which Mr. Howorth assigns to the second of that name, a view in which he will be glad to find himself corroborated by no less an authority than Mr. Bunbury. Whether he is equally right in the suggestion that a gold medalion bearing the name of Diocletian should be regarded as bearing the head of Maximinian merely on account of the divergence of the portrait from the usual type, is a question which cannot be readily solved in the affirmative, least of all by those who know how differently Diocletian is represented on his ordinary gold coins struck in different parts of the empire, say, for instance, at Rome and at Antioch.

The coins of ancient Spain have been brought under our notice by Mr. Head in an article founded on the great work of Don Zohel de Zangroniz, which is probably the most complete guide to the coinage of the Iberian peninsula in Roman and pre-Roman times which has appeared. The analogies between some of the coins of that part of Europe with those of Gaul, and even of Britain, and the traces of Greek and Phœnician influences upon them, add much to the interest of the series.

In Jewish numismatics we have had but one short note by Mr. Reichardt, giving us an account of a new type of John Hyrcanus, resembling one of Alexander Jannæus, and some valuable suggestions as to the meaning of the word *Chaber* (חבר), which constantly occurs on the coins of the Maccabees.

In Roman numismatics there is little if anything to record, as, with the exception of the exhibition of one or two rare coins,

and the paper by Mr. Howorth already mentioned, this important series has not been brought under our notice. I venture to hope that this apparent neglect of a highly interesting branch of our study will not be of long duration.

The coinage of our own country has met with much attention during the past year. Mr. Montagu has brought under our notice the small Northumbrian coins we know as styces, and argued in favour of the view that the occurrence of such coins in silver, either more or less alloyed, is due rather to accident than to any attempt to introduce a silver currency. As I still adhere to the opinion I expressed on this subject three years ago, and as Mr. Montagu entirely agrees with me, I used say no more at present on this head.

Particulars of an extensive and interesting hoard of coins, mostly of Henry I. and Stephen, have been communicated to us by Mr. Wakeford. Among the coins are two of the curious pieces bearing the name of PERERIC, as well as several of Stephen issued from mints which were not previously known to have been at work in his reign. The probability that the type of Henry I., given as No. 255 by Hawkins, was the last that he struck, and that Stephen's type, No. 270 of Hawkins, was his first, which had been deduced from hoards previously discovered, is confirmed by this Kentish find. It also seems to show that the second important type of Stephen was Hawkins's No. 269, though from the similarity of its obverse to that of the last coins of Henry I. it might not naturally have been supposed immediately to follow them.

The subject of the early Scottish coinage has been more than once brought before us during the course of the session. Among other coins I may mention one of Alexander III., which Mr. Pollock has assigned to the mint of Glasgow, and which I have at different times attributed to that of Stirling and of Renfrew. It certainly cannot belong to all three mints, and judging from a coin in the collection of Mr. Montagu, which also has been exhibited to us, I am inclined to think that

if either of my attributions is right it is the latter ; but possibly the question may be set at rest by the forthcoming work on the coinage of Scotland on which Mr. Burns has so long and assiduously been at work. Our veteran honorary member, Dr. Aquilla Smith, has again given us some papers on Irish numismatics, in one of which he discusses the question of the date when money was first coined in Ireland, and shows that many of Lindsay's and Simon's attributions of coins to early Hiberno-Danish kings are destitute of foundation, and that in all probability no money was struck in Ireland before the reign of Sihtric III., King of Dublin, who was a contemporary of Æthelred II.

In another paper Dr. Smith discusses the Hiberno-Danish coins with a rude representation of the human hand upon them, but the meaning and origin of the symbol seems to be still somewhat obscure. The same author has communicated to us a notice of an unpublished half-groat of Edward IV., struck at Galway, and Canon Pownall has claimed for Ireland some of the coins of Edward VI. bearing the mint-mark of a rose.

Mr. Robert Day has been able to show us that the so-called Cork siege-pieces assigned by Lindsay to the year 1641 are in fact subsequent to the year 1677, so that so far as this Society is concerned justice has this year been done to Ireland.

Of comparatively modern English coins we have had some short notes, and Mr. Gill has favoured us with another instalment of tradesmen's tokens not described by Boyne, which this time relates to those issued in Hampshire.

On the currency of our dependencies and colonies we have had several papers. Mr. Thomas has given us an interesting account of the early coins of the East India Company issued at Bombay under the charters of Charles II., with some notes on the early rates of exchange. Sir J. H. Lefroy has described a hitherto unknown piece coined for the Somers Islands, or Bormuda, and of the value of threepence. As pieces of twelve, six,

and twopence had already been described, it seems possible that those of fourpence and one penny may yet be discovered. Sir H. Lefroy has also called attention to an ingenious adaptation of the pillar dollar practised in New South Wales in 1813, by which the value was enhanced by 50 per cent., or from 4s. 2d. to 6s. 8d. A small disc was struck from the centre of the dollar and made current for 1s. 8d. while the annular residue was stamped with the value of 5s. This colonial practice, which prevailed in Trinidad in 1811,² may have been derived with modifications from the mother country, for my father has told me that before the great re-coinage of silver in 1816 it was a not uncommon device to hammer out an old halfcrown into a thin plate and then punch from it seven or eight sixpences which showed quite as much of the royal image and superscription as those in ordinary circulation.

In foreign numismatics Canon Pownall has given us what I trust is only the first instalment of a series of papers on Papal medals. Those of which he at present treats are of the fifteenth century, and are of the highest interest as illustrative not alone of the history of the period, but of that revival of medallio art which characterised the close of that century. It was a time from which we may date the beginning of much of our present civilisation. The art of printing, the discovery of America, the commencement of the Reformation, the revival of classical taste and classical architecture, all contributed to form an atmosphere in which art, science, and literature could flourish, and the artists of those days not unfrequently combined in one person the painter, the sculptor, the architect, and the medallist. The grand works of Pisano and his countrymen are now, after four hundred years, as highly appreciated as they were when first modelled, if not, indeed, more highly prized than they then were; while the modern appliances of photography enable us as fully to realise the beauty of their works when we see them

² Ruding, vol. ii. p. 107.

on paper as when we see them in their original bronze. Canon Pownall's subject is one of interest alike to artists and antiquaries, and he will, I hope, continue to illustrate it from time to time in our Chronicle.

In Oriental numismatics we have had articles on some Mussulman coins by M. H. Sanvaire and by Mr. Vaux, on the weights and denominations of Turkish coins by Mr. Stanley Lane-Poole; and while Sir E. Clive Bayley has given us papers on certain dates occurring on the coins of the Hindn kings of Kabul, which incidentally bring forward the question of the origin and development of our ordinary Arabic numerals, Prof. Terrien de La Conperie has favoured us with an interesting article on some Chinese paper-money dating back to so early a period as the ninth century, and has also speculated on the date of the Chinese abacus or *swan-pan*.

The exhibitions of coins and medals at our meetings have been numerous and interesting, and the conversational discussion to which some of these exhibitions have given rise have, I think, formed not the least pleasing feature of our evenings.

Such is a brief review of our work during the past year, and I think it must be regarded as satisfactory. I must now pass to the sadder record of the members whom death has removed from among our numbers. Several of these had been more or less frequent attendants at our meetings and contributors to our Journal.

The first that I must mention is Mr. John Davidson, whose decease took place in 1881: He was for many years a member of our Society, and occasionally served upon the Council. Regarding coins and medals from the artistic rather than the historic side, he did not communicate any papers to us.

Dr. W. Freudenthal was also for many years a well-known member, and at one time treasurer of our Society, though during the latter part of his life he resided in his native country, Hanover, occasionally, however, visiting England. The

only paper that he communicated to us was on some patterns of coins for Hong Kong, but his knowledge of the coins of all countries was, like his collection, extensive, and his series of copper coins, which is now preserved in the British Museum, numbered many thousands.

Mr. James Whittall, of Smyrna, was also perhaps better known as a collector than as an author, though upwards of forty years ago he gave to the Society a paper on some unpublished coins of Taba, in Caria.

Mr. James White had been for very many years a member of the Society, and had written on the iron money of the Japanese. For some years he was an alderman of the city of London, and at different times represented the borough of Plymouth and subsequently Brighton in Parliament. He died on January 4 of the present year, in the seventy-fourth year of his age.

The Rev. Dr. Huckin, Head Master of Repton School, in Derbyshire, was a comparatively young member of the Society, and living at a distance from London was rarely, if ever, able to attend our meetings.

Although he was not a member of the Society at the time of his death, I must take this opportunity of paying a passing tribute to the late Mr. J. S. Smallfield, who died on April 27 last, at the age of sixty-nine. He was for many years one of our members, and his collection of local tokens was known as one of the most complete in England. As an illustration I may mention that in a paper communicated in 1870 he added no less than two hundred and forty varieties to the tokens then known of London and Southwark. During his closing years I fear that failing health and diminished means compelled him to relinquish his favourite pursuit.

To this list I am sorry to have to add the name of Mr. J. G. Pfister, who for many years was a member of this Society, though some little time ago he retired from it. His death took place about the beginning of this month. A constant traveller

abroad, in the capacity, I believe, of a courier, he enjoyed frequent opportunities of indulging his natural taste for numismatics, and acquired an intimate acquaintance with modern and mediæval coins, especially those of the Continent. This knowledge was for some years utilised in arranging the foreign series in the medal room of the British Museum. In the early days of the Society he was a not unfrequent contributor to the Chronicle, the first series of which contains nine papers from his pen, the last, of considerable length, bearing the title of "Stray Leaves from the Journal of a Traveller in search of Ancient Coins."

With these imperfect notices of departed friends I must close this address, which I hope you have not found needlessly prolonged, and for your attention to which I offer you my best thanks.

The Treasurer's Report is appended:—

Statement of Receipts and Disbursements of the Numismatic Society, from June, 1882, to June, 1883.

Dr. THE NUMISMATIC SOCIETY OF LONDON IN ACCOUNT WITH ALFRED EVELYN COPP, TREAS. Cr.

	£	s.	d.	£	s.	d.
To Messrs. Virtue & Co., for printing Chronicle, Part I., 1882 }	89	4	6			
ditto ditto ditto Part II. 1882	50	0	0			173 12 8
ditto ditto ditto Part III. 1882	39	14	0			27 6 0
ditto ditto ditto Part IV. 1882	40	6	6			14 14 0
The Autotype Company	53	6	4			244 18 0
J. Davy and Son, for printing	1	2	0	Of Alexander Peckover, for 1881	0	3 8
Mrs. Ayres, one year's Rent to Christmas, 1882	20	0	0	Rollin and Fenardent	3	10 0
ditto gratuity for Attendance	5	0	0	Francis W. Pixley	0	14 0
ditto for Coffee, Postages, &c.	3	13	8	John Russell Smith	54	10 0
F. J. Lees, for Engraving and Etching	21	14	0			58 17 8
E. Watson, Bookbinder	1	15	9	Professor Percy Gardner, for 100 extra copies of plates, 8 to 13, and printing titles	5	5 0
Charles Branscombe for Engraving	2	15	0	Col. Tobin Bush, for Foreign Postage	0	3 0
Fire Insurance on £500	0	15	0	Half-year's Dividend on £500 3 per cent. Consols due 5th July, 1882	7	6 11
Treasurer, and Collector, for Postages, Receipts, Stationery, &c.	3	10	0	" " due 5th January, 1883	7	5 0
Secretary, for Postages, &c.	2	10	0			
Collector (Mr. E. Robinson), for Commission	5	2	6			
Balance	243	14	5			
	<u>£539 3 3</u>					
				By Balance in hand	243	14 5
						<u>£539 3 3</u>

ALFRED E. COPP, HON. TREASURER.
21st June, 1883.

The Meeting then proceeded to ballot for the Council and Officers for the ensuing year, when the following gentlemen were elected :—

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OF THE
NUMISMATIC SOCIETY
OF LONDON.

DECEMBER, 1883.

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OF LONDON.
DECEMBER, 1883.

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